

MONTHLY BULLETIN of REGIONAL and TELESEISMIC EVENTS RECORDED with GRF- and GRSN-STATIONS in GERMANY

(produced by SZGRF/BGR - HANNOVER)

March 2009 UPDATED 11.AUGUST.2009

Please note that local events recorded in Germany are part of the "LOCAL BULLETIN".

(Format description at the end of the bulletin)

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/01	00:05:38.3	39.727N	70.970E	33.0N	4.3			SZGRF

Tajikistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:13:30.2	42.4	79.9	2.4	16	4.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/01	00:41:12.9	65.440N	16.161W	10.0G	4.4	3.6		SZGRF

Iceland

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e P	Z 00:45:35.9	19.1	325.4	1.2	20	4.2		
CLL	e P	Z 00:45:49.3	20.5	324.6	1.5	19	4.2		
MOX	e P	Z 00:45:51.4	20.5	326.5	0.8	7	4.1		
TANN	e P	Z 00:45:56.3	21.0	326.3	1.3	23	4.3		
BRG	e P	Z 00:45:57.4	21.2	324.8	1.5	30	4.4		
GRA1	e P	Z 00:45:57.8	21.2	328.1	1.4	39	4.6		
	e L	Z 00:54:31.0			22.0	260		3.6	
STU	e P	Z 00:45:58.5	21.3	330.7	1.0	21	4.4		
BFO	e P	Z 00:45:59.4	21.4	331.9	1.2	15	4.3		
ROTZ	e P	Z 00:46:00.2	21.5	327.4	1.6	29	4.4		
WET	e P	Z 00:46:10.9	22.2	327.8	2.2	51	4.6		
FUR	e P	Z 00:46:14.2	22.5	330.0	1.7	62	4.9		
GEC2	e P	Z 00:46:16.3	22.8	327.7	1.5	28	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2009/03/01 04:32:50.1
Fiji Islands region

19.652S 176.135W 33.0G

SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	04:52:24.3	145.4	10.7					
IBBN	e PKPbc	Z	04:52:29.3	147.2	6.8					
CLL	e PKPbc	Z	04:52:30.2	147.5	16.2					
BRG	e PKPbc	Z	04:52:30.7	147.8	18.0					
MOX	e PKPbc	Z	04:52:32.5	148.4	14.0					
TANN	e PKPbc	Z	04:52:32.6	148.5	15.6					
ROTZ	e PKPbc	Z	04:52:34.2	149.2	15.5					
TNS	e PKPbc	Z	04:52:34.6	149.2	8.5					
GRA1	e PKPbc	Z	04:52:35.5	149.4	13.7					
GEC2	e PKPbc	Z	04:52:35.4	149.8	18.6					
WLF	e PKPbc	Z	04:52:36.8	149.9	4.3					

Date Origin Time
2009/03/01 05:33: 0.5
Southern Xinjiang, China

Lat Long Depth mb Ms ML Source
39.700N 74.400E 55.0 4.3 NEIC

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	05:40:53.5	42.7	80.8	0.9	5	4.2		
CLL	e P	Z	05:40:57.4	43.2	80.6	0.8	4	4.2		
GEC2	e P	Z	05:40:58.5	43.2	78.5	1.6	14	4.4		
WET	e P	Z	05:41:02.0	43.7	78.3	1.0	4	4.1		
MOX	e P	Z	05:41:06.0	44.2	79.0	1.0	3	4.0		
GRA1	e P	Z	05:41:10.1	44.6	77.8	1.0	9	4.7		

Date Origin Time
2009/03/01 08:17:32.7
Kermadec Islands region

Lat Long Depth mb Ms ML Source
28.090S 177.230W 31.0 SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e pPKPdf	Z	08:37:28.8	153.6	15.1					
NRDL	e pPKPdf	Z	08:37:31.9	155.0	15.5					
CLL	e PKPdf	Z	08:37:23.4	155.5	22.2					
	e pPKPdf	Z	08:37:33.3							
	e PKPab	Z	08:37:48.4							
CLZ	e pPKPdf	Z	08:37:33.5	155.6	16.4					
BRG	e PKPdf	Z	08:37:24.2	155.7	24.5					
	e pPKPdf	Z	08:37:34.2							
	e PKPab	Z	08:37:49.8							
BUG	e PKPab	Z	08:37:52.4	156.4	10.0					
ROTZ	e pPKPdf	Z	08:37:36.8	157.2	21.9					
	e PKPab	Z	08:37:56.0							

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TNS	e	pPKPab	Z	08:38:06.4	157.5	13.2
GRA1	e	PKPab	Z	08:37:57.3	157.5	19.8
WET	e	PKPdf	Z	08:37:26.5	157.6	23.9
	e	PKPab	Z	08:37:58.2		
GEC2	e	pPKPdf	Z	08:37:37.8	157.6	26.0
	e	PKPab	Z	08:37:58.6		
WLF	e	PKPab	Z	08:38:01.9	158.3	8.1
	e	pPKPab	Z	08:38:11.0		
STU	e	PKPdf	Z	08:37:28.9	158.7	15.8
FUR	e	PKPab	Z	08:38:04.0	158.9	21.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/01	12:30:20.3	21.660S	177.550W	33.0N				SZGRF
Fiji Islands region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	PKPbc	Z 12:50:00.2	147.2	13.6					
IBBN	e	PKPab	Z 12:50:09.2	149.1	9.6					
CLZ	e	PKPbc	Z 12:50:05.6	149.2	14.5					
CLL	e	PKPbc	Z 12:50:05.5	149.2	19.4					
	e	PKPab	Z 12:50:10.1							
BRG	e	PKPbc	Z 12:50:06.2	149.4	21.4					
	e	PKPab	Z 12:50:11.1							
MOX	e	PKPbc	Z 12:50:07.5	150.1	17.3					
TANN	e	PKPbc	Z 12:50:08.3	150.2	19.0					
ROTZ	e	PKPbc	Z 12:50:09.9	150.9	18.9					
TNS	e	PKPbc	Z 12:50:10.0	151.0	11.6					
	e	PKPab	Z 12:50:17.8							
GEC2	e	PKPbc	Z 12:50:10.8	151.4	22.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/01	15:42:15.7	21.300S	177.110W	164.1				SZGRF
Fiji Islands region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	PKPbc	Z 16:01:38.4	146.9	12.7					
	e	pPKPbc	Z 16:02:21.0							
NRDL	e	PKPbc	Z 16:01:42.1	148.3	12.9					
	e	pPKPbc	Z 16:02:24.9							
IBBN	e	PKPbc	Z 16:01:43.3	148.8	8.8					
	e	PKPab	Z 16:01:47.4							
	e	pPKPbc	Z 16:02:26.3							
CLZ	e	PKPbc	Z 16:01:44.0	148.9	13.6					
	e	pPKPbc	Z 16:02:26.7							
CLL	e	PKPbc	Z 16:01:43.7	149.0	18.5					

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BRG	e PKPbc	Z	16:01:44.4	149.2	20.4
	e PKPab	Z	16:01:49.2		
BUG	e PKPab	Z	16:01:50.5	149.7	8.1
MOX	e PKPbc	Z	16:01:46.1	149.9	16.4
	e pPKPbc	Z	16:02:28.9		
TANN	e PKPbc	Z	16:01:46.5	149.9	18.0
	e PKPab	Z	16:01:52.4		
	e pPKPbc	Z	16:02:29.4		
UBBA	e pPKPbc	Z	16:02:29.2	150.0	13.3
ROTZ	e PKPbc	Z	16:01:47.8	150.6	17.9
	e PKPab	Z	16:01:54.4		
	e pPKPbc	Z	16:02:31.1		
TNS	e PKPbc	Z	16:01:48.3	150.7	10.6
	e PKPab	Z	16:01:55.6		
GRA1	e PKPbc	Z	16:01:48.5	150.9	16.1
	e PKPab	Z	16:01:56.3		
	e pPKPbc	Z	16:02:31.5		
WET	e PKPbc	Z	16:01:48.9	151.0	19.5
	e PKPab	Z	16:01:57.3		
GEC2	e PKPbc	Z	16:01:49.1	151.1	21.2
	e PKPab	Z	16:01:57.6		
	e pPKPbc	Z	16:02:31.8		
WLF	e PKPab	Z	16:01:59.1	151.5	6.4
STU	e PKPbc	Z	16:01:51.1	152.1	12.6
	e PKPab	Z	16:02:00.9		
FUR	e PKPbc	Z	16:01:51.7	152.3	17.0
	e PKPab	Z	16:02:02.4		
BFO	e PKPbc	Z	16:01:52.1	152.6	11.1
	e PKPab	Z	16:02:03.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/01	17:19: 5.0	46.538N	152.599E	33.0G	4.7			SZGRF
Kuril Islands, Russia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	17:30:48.9	76.2	27.3	0.8	13	5.2		
FBE	e P	Z	17:30:50.6	76.4	27.5	0.9	8	4.8		
CLZ	e P	Z	17:30:50.8	76.4	25.7	0.8	8	4.9		
WERD	e P	Z	17:30:54.7	77.1	26.8	0.7	2	4.4		
WERN	e P	Z	17:30:55.6	77.3	26.8	0.7	5	4.7		
ROHR	e P	Z	17:30:56.3	77.3	26.8	1.1	2	4.0		
GRA1	e P	Z	17:31:01.2	78.1	26.0	0.7	7	4.9		
WET	e P	Z	17:31:00.8	78.1	27.0	1.2	8	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2009/03/02 00:03:39.8 1.100S 119.900E 10.0 5.0 NEIC
Sulawesi, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pdiff	Z 00:17:34.6	101.4	78.4					
MOX	e L	Z 01:11:11.2	102.3	76.4	20.7	415		4.9	
GRA1	e Pdiff	Z 00:17:37.6	102.8	76.3					
	e PP	Z 00:21:54.8							
	e L	Z 01:14:19.3			18.9	589		5.1	

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/02 15:05:1.9 30.280N 67.910E 33.0G 4.8 SZGRF
Pakistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 15:13:14.9	44.6	96.2	1.3	9	4.5		
FBE	e P	Z 15:13:18.8	45.0	95.8	1.4	24	4.9		
TANN	e P	Z 15:13:21.5	45.5	94.5	1.1	4	4.4		
ROHR	e P	Z 15:13:22.6	45.6	94.2	1.5	3	4.1		
NEUB	e P	Z 15:13:26.0	46.0	94.7	1.4	24	5.0		
MOX	e P	Z 15:13:26.4	46.1	94.0	1.1	8	4.7		
GRA1	e P	Z 15:13:28.8	46.3	92.8	1.5	20	4.9		
CLZ	e P	Z 15:13:33.6	46.9	94.2	1.3	18	5.0		
BSEG	e P	Z 15:13:35.5	47.2	96.1	0.9	17	5.2		

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/02 18:35:19.7 4.961N 96.475E 143.7N 5.0 SZGRF
Northern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 18:47:19.7	81.4	92.7	0.9	6	4.6		
GEC2	e P	Z 18:47:20.4	81.5	92.2	1.3	8	4.7		
RUE	e P	Z 18:47:21.0	81.6	92.8	1.0	25	5.3		
FBE	e P	Z 18:47:22.2	81.8	92.2	1.1	8	4.7		
CLL	e P	Z 18:47:23.0	82.1	92.0	1.1	7	4.7		
WET	e P	Z 18:47:23.0	82.1	91.6	0.7	5	4.7		
ROTZ	e P	Z 18:47:26.6	82.5	91.2	0.8	4	4.7		
NEUB	e P	Z 18:47:27.3	82.8	91.0	0.7	11	5.2		
GRA1	e P	Z 18:47:29.6	83.1	90.4	0.8	9	5.0		
CLZ	e P	Z 18:47:31.8	83.7	90.0	0.6	12	5.3		
TNS	e P	Z 18:47:38.3	84.9	88.3	0.7	5	4.9		
BFO	e P	Z 18:47:38.4	85.1	88.1	0.8	6	4.9		
IBBN	e P	Z 18:47:40.1	85.3	88.0	0.7	18	5.4		
BUG	e P	Z 18:47:41.4	85.6	87.5	1.0	18	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/02	21:46:12.6	32.474N	49.349E	33.0G	4.7	4.1		SZGRF

Western Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	21:52:29.0	31.2	108.3	1.2	5	4.3		
BRG	e P	Z	21:52:33.4	31.7	111.7	0.9	5	4.4		
WET	e P	Z	21:52:33.7	31.8	107.9	1.1	8	4.5		
ROTZ	e P	Z	21:52:39.5	32.4	108.1	0.9	7	4.6		
CLL	e P	Z	21:52:40.3	32.5	111.3	1.0	8	4.6		
FUR	e P	Z	21:52:40.4	32.5	104.7	0.9	21	5.1		
GRA1	e P	Z	21:52:44.9	33.0	107.0	1.5	31	5.0		
	e L	Z	22:14:35.3			16.3	296		4.1	
CLZ	e P	Z	21:52:54.8	34.2	109.1	0.9	11	4.8		
NRDL	e P	Z	21:52:59.3	34.5	109.7	1.8	34	5.0		
TNS	e P	Z	21:53:01.1	34.9	104.9	1.3	10	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/02	22:02: 8.9	37.140N	27.250E	33.0G	4.0			SZGRF

Turkey

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	22:05:49.1	15.3	134.9	1.2	14	4.0		
WET	e P	Z	22:05:54.2	15.9	133.7	1.2	18			
FUR	e P	Z	22:05:57.1	16.1	127.5	1.0	64			
TANN	e P	Z	22:06:08.5	17.0	135.8	1.9	18			
GRA1	e P	Z	22:06:08.4	17.0	131.3	1.1	18			
MOX	e P	Z	22:06:16.6	17.5	134.4	0.9	5			
STU	e P	Z	22:06:14.6	17.5	124.9	0.7	12			
BFO	e P	Z	22:06:19.1	17.8	122.1	0.9	9			
TNS	e P	Z	22:06:27.2	18.8	127.0	1.1	14			
CLZ	e P	Z	22:06:29.7	18.9	134.4	2.1	43			
WLF	e P	Z	22:06:37.3	19.7	121.5	1.0	22			
BUG	e P	Z	22:06:41.4	20.1	127.6	1.2	30			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/03	14:22:19.6	38.999N	71.896E	33.0G	4.8	4.6		SZGRF

Afghanistan-Tajikistan border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	14:30:03.3	41.5	83.3	1.0	17	4.7		
GEC2	e P	Z	14:30:07.1	42.0	80.9	1.0	8	4.4		
CLL	e P	Z	14:30:07.4	42.1	83.1	0.8	12	4.7		

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WET	e P	Z	14:30:10.8	42.5	80.7	1.2	11	4.5		
TANN	e P	Z	14:30:11.6	42.5	81.8	1.5	20	4.6		
MOX	e P	Z	14:30:15.4	43.0	81.5	1.0	9	4.4		
BSEG	e P	Z	14:30:19.3	43.4	84.0	0.8	29	5.1		
GRA1	e P	Z	14:30:19.6	43.4	80.2	0.9	18	4.8		
	e L	Z	14:50:50.3			20.0	712		4.6	
CLZ	e P	Z	14:30:20.6	43.6	81.9	0.9	10	4.6		
NRDL	e P	Z	14:30:20.5	43.7	82.4	1.4	36	4.9		
IBBN	e P	Z	14:30:34.0	45.2	80.5	1.0	39	5.3		
BFO	e P	Z	14:30:36.0	45.6	77.1	1.2	12	4.8		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/03 16:21:55.8 31.700N 104.295E 33.0G 5.2
 Sichuan, China SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	16:32:39.9	66.2	68.5	0.9	14	5.2		
CLL	e P	Z	16:32:42.1	66.5	68.0	1.0	10	5.0		
BSEG	e P	Z	16:32:45.9	67.0	67.2	1.0	31	5.5		
GEC2	e P	Z	16:32:46.1	67.1	67.5	1.2	13	5.0		
TANN	e P	Z	16:32:46.6	67.2	67.3	0.9	9	5.0		
WET	e P	Z	16:32:48.4	67.4	67.1	1.2	10	4.9		
ROTZ	e P	Z	16:32:49.6	67.6	66.9	1.0	17	5.2		
MOX	e P	Z	16:32:49.3	67.6	66.8	1.2	11	5.0		
NRDL	e P	Z	16:32:50.3	67.7	66.5	1.0	19	5.3		
CLZ	e P	Z	16:32:50.9	67.8	66.4	0.9	20	5.3		
GRA1	e P	Z	16:32:53.5	68.2	66.2	1.0	26	5.4		
UBBA	e P	Z	16:32:55.7	68.5	65.8	1.7	21	5.1		
FUR	e P	Z	16:32:57.5	68.8	65.7	0.8	38	5.7		
IBBN	e P	Z	16:32:58.6	69.1	64.8	0.7	19	5.5		
TNS	e P	Z	16:33:01.7	69.6	64.5	0.8	8	4.9		
BFO	e P	Z	16:33:07.2	70.5	63.9	1.1	10	4.9		
WLF	e P	Z	16:33:11.9	71.2	62.8	1.2	44	5.5		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/04 03:45:04.4 45.600N 101.300E 10.0 4.7
 Mongolia NEIC

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:54:50.2	57.0	56.5	1.2	9	4.7		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/04 10:56:43.3 2.800N 95.400E 27.0 5.1
 NEIC

Off west coast of northern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:09:12.7	84.1	92.6	1.3	15	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/05	08:29:26.6	20.760S	176.980W	33.0N				SZGRF

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPab	Z 08:49:12.2	148.2	8.4					
CLZ	e PKPbc	Z 08:49:09.6	148.4	13.2					
CLL	e PKPbc	Z 08:49:09.5	148.5	18.1					
	e PKPab	Z 08:49:12.9							
BRG	e PKPbc	Z 08:49:10.2	148.7	19.9					
FBE	e PKPbc	Z 08:49:10.7	148.8	18.9					
NEUB	e PKPbc	Z 08:49:10.6	148.8	15.9					
MOX	e PKPbc	Z 08:49:11.9	149.4	15.9					
PLN	e PKPbc	Z 08:49:12.1	149.4	17.0					
WERD	e PKPbc	Z 08:49:12.2	149.4	17.3					
TANN	e PKPbc	Z 08:49:12.1	149.4	17.6					
UBBA	e PKPbc	Z 08:49:12.2	149.4	12.9					
GUNZ	e PKPbc	Z 08:49:12.5	149.5	17.3					
	e PKPab	Z 08:49:17.5							
WERN	e PKPbc	Z 08:49:12.7	149.6	17.5					
	e PKPab	Z 08:49:17.9							
ROTZ	e PKPbc	Z 08:49:14.0	150.1	17.4					
TNS	e PKPbc	Z 08:49:14.3	150.2	10.3					
GRA1	e PKPbc	Z 08:49:14.6	150.3	15.6					
	e PKPab	Z 08:49:21.2							
GEC2	e PKPbc	Z 08:49:15.2	150.6	20.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/05	10:37:52.1	44.600N	151.000E	97.0	4.6			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z 10:49:38.0	77.5	29.2	0.6	10	5.1		
ROTZ	e P	Z 10:49:48.7	79.0	28.5	1.0	2	4.2		
GEC2	e P	Z 10:49:49.2	79.4	29.4	1.5	6	4.3		
WET	e P	Z 10:49:49.7	79.4	28.9	1.3	20	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2009/03/05 12:17:55.6
Greenland Sea

77.940N

0.850E

33.0G

5.2

4.4

SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e L	Z	12:32:14.9	23.8	353.6	18.5	2178		4.7	
HLG	e P	Z	12:23:11.5	23.9	356.4	1.1	146	5.4		
	e L	Z	12:32:10.1			21.8	1090		4.3	
BSEG	e P	Z	12:23:14.5	24.2	355.2	1.5	161	5.3		
	e L	Z	12:32:33.3			18.8	1687		4.6	
NRDL	e P	Z	12:23:27.3	25.7	355.5	1.6	52	4.9		
IBBN	e P	Z	12:23:27.8	25.8	356.7	2.3	167	5.3		
	e L	Z	12:33:19.5			21.1	1079		4.4	
RUE	e P	Z	12:23:29.2	25.9	353.9	1.5	72	5.1		
	e L	Z	12:33:39.6			20.0	1831		4.6	
CLZ	e P	Z	12:23:33.4	26.3	355.5	1.7	57	4.9		
	e L	Z	12:33:25.7			21.2	1692		4.6	
BUG	e L	Z	12:33:56.2	26.6	357.0	19.4	857		4.3	
CLL	e P	Z	12:23:38.8	27.0	354.4	1.4	59	5.1		
	e L	Z	12:34:23.7			18.4	1179		4.5	
UBBA	e P	Z	12:23:42.5	27.3	355.8	2.0	58	5.0		
	e L	Z	12:34:07.2			21.6	1315		4.5	
FBE	e P	Z	12:23:42.8	27.4	354.4	1.1	79	5.5		
BRG	e P	Z	12:23:43.4	27.5	354.1	1.2	58	5.3		
	e L	Z	12:34:38.0			20.2	1310		4.5	
MOX	e P	Z	12:23:44.7	27.6	355.2	1.4	60	5.2		
	e L	Z	12:34:24.7			21.3	769		4.3	
PLN	e P	Z	12:23:46.5	27.8	355.0	1.1	289	6.0		
WERD	e P	Z	12:23:46.7	27.8	354.9	1.2	52	5.2		
TANN	e P	Z	12:23:47.3	27.9	354.8	1.1	58	5.3		
	e L	Z	12:34:12.5			21.7	535		4.1	
TNS	e P	Z	12:23:47.0	27.9	356.6					
	e L	Z	12:34:35.1			21.3	1074		4.4	
GUNZ	e P	Z	12:23:47.7	27.9	354.9	1.2	63	5.3		
WERN	e P	Z	12:23:48.5	28.0	354.9	1.1	81	5.5		
WLF	e L	Z	12:37:42.1	28.3	357.7	20.4	689		4.2	
ROTZ	e P	Z	12:23:52.9	28.5	355.1	1.2	46	5.2		
	e L	Z	12:35:21.9			19.3	600		4.2	
GRA1	e P	Z	12:23:53.0	28.5	355.5	1.2	32	5.0		
	e L	Z	12:34:42.3			20.8	1034		4.4	
WET	e P	Z	12:23:59.1	29.2	354.9	1.3	32	5.0		
	e L	Z	12:35:50.1			19.2	597		4.2	
STU	e P	Z	12:24:00.2	29.3	356.5	1.1	33	5.1		
	e L	Z	12:35:29.6			20.7	961		4.4	
GEC2	e P	Z	12:24:02.2	29.5	354.6	1.2	62	5.3		
	e L	Z	12:35:59.7			18.3	969		4.5	
BFO	e P	Z	12:24:03.7	29.7	356.9	1.0	12	4.6		
	e L	Z	12:35:18.8			22.0	1067		4.4	
FUR	e P	Z	12:24:06.7	30.0	355.7	1.6	72	5.3		
	e L	Z	12:36:39.4			18.6	927		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/05	15:49:54.2	15.600N	96.000E	14.0	4.9			NEIC

Near south coast of Myanmar

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:01:35.6	74.8	83.6	1.7	22	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/05	19:42: 3.2	77.650N	0.640E	33.0G	5.2	4.4		SZGRF

Greenland Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 19:47:20.4	24.0	354.9	1.1	115	5.3		
	e L	Z 19:56:38.3			21.7	2661		4.7	
NRDL	e P	Z 19:47:33.1	25.4	355.3	1.3	37	4.9		
	e L	Z 19:57:32.5			21.3	1907		4.6	
IBBN	e L	Z 19:57:23.9	25.5	356.5	21.9	1418		4.4	
CLZ	e L	Z 19:58:04.0	26.1	355.3	20.8	1687		4.6	
BUG	e P	Z 19:47:41.4	26.3	356.8	1.5	71	5.1		
	e L	Z 19:58:00.3			21.0	1058		4.4	
CLL	e P	Z 19:47:44.7	26.7	354.2	1.3	74	5.3		
	e L	Z 19:58:48.6			18.8	1208		4.5	
UBBA	e L	Z 19:58:45.1	27.1	355.6	21.0	1413		4.5	
BRG	e P	Z 19:47:49.1	27.2	353.8	1.3	67	5.2		
	e L	Z 19:59:04.0			19.1	1626		4.6	
MOX	e P	Z 19:47:50.4	27.3	354.9	1.2	62	5.2		
	e L	Z 19:58:42.0			21.3	914		4.3	
TNS	e P	Z 19:47:52.8	27.6	356.4	1.8	75	5.2		
	e L	Z 19:58:50.4			21.4	1323		4.5	
TANN	e P	Z 19:47:53.0	27.6	354.6	1.1	69	5.4		
	e L	Z 19:58:40.1			20.9	659		4.2	
WLF	e L	Z 20:02:56.3	28.1	357.5	19.7	748		4.3	
ROTZ	e P	Z 19:47:58.7	28.2	354.8	1.2	54	5.3		
	e L	Z 19:59:10.1			20.8	649		4.2	
GRA1	e P	Z 19:47:58.9	28.2	355.2	1.6	73	5.3		
	e L	Z 19:59:20.9			21.2	974		4.4	
WET	e P	Z 19:48:04.8	28.9	354.6	1.3	40	5.1		
	e L	Z 19:59:17.8			21.5	629		4.2	
STU	e P	Z 19:48:06.0	29.1	356.2	1.4	86	5.4		
	e L	Z 19:59:33.6			22.0	1493		4.6	
GEC2	e P	Z 19:48:08.0	29.2	354.3	1.1	74	5.4		
	e L	Z 20:00:15.3			18.5	1005		4.5	
BFO	e P	Z 19:48:09.5	29.5	356.7	1.5	36	5.0		
	e L	Z 19:59:57.7			21.3	1160		4.5	

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FUR	e P	Z	19:48:12.4	29.8	355.4	1.4	100	5.5	
	e L	Z	19:59:54.6			21.7	1109	4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/05	19:33: 9.7	19.300S	179.650W	515.4				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	19:51:49.9	145.9	16.6					
	e sPKPbc	Z	19:54:41.5							
CLL	e PKPbc	Z	19:51:52.1	146.5	22.0					
IBBN	e PKPbc	Z	19:51:51.8	146.5	12.7					
	e sPKPbc	Z	19:54:42.9							
CLZ	e PKPbc	Z	19:51:52.4	146.5	17.3					
	e sPKPbc	Z	19:54:43.1							
BRG	e PKPbc	Z	19:51:52.8	146.6	23.8					
MOX	e PKPbc	Z	19:51:54.7	147.4	20.0					
TANN	e PKPbc	Z	19:51:55.1	147.4	21.6					
ROTZ	e PKPbc	Z	19:51:57.1	148.1	21.5					
	e PKPab	Z	19:52:00.2							
GRA1	e PKPbc	Z	19:51:57.8	148.4	19.9					
	e PKPab	Z	19:52:01.3							
TNS	e PKPbc	Z	19:51:57.6	148.4	14.7					
	e PKPab	Z	19:52:00.6							
WET	e PKPbc	Z	19:51:58.1	148.5	23.1					
	e PKPab	Z	19:52:02.0							
	e pPKPbc	Z	19:53:57.8							
	e sPKPbc	Z	19:54:47.4							
GEC2	e PKPbc	Z	19:51:58.3	148.6	24.7					
	e PKPab	Z	19:52:02.0							
WLF	e PKPbc	Z	19:52:00.3	149.3	10.8					
STU	e PKPbc	Z	19:52:00.9	149.7	16.7					
	e PKPab	Z	19:52:05.6							
FUR	e PKPbc	Z	19:52:01.5	149.8	20.8					
	e PKPab	Z	19:52:07.1							
BFO	e PKPbc	Z	19:52:02.3	150.3	15.3					
	e PKPab	Z	19:52:08.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/06	06:59: 1.6	21.572S	178.068W	33.0N				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	07:18:40.6	147.0	14.4					
NRDL	e PKPbc	Z	07:18:44.4	148.4	14.6					

CLZ	e	PKPbc	Z	07:18:45.8	149.0	15.4
CLL	e	PKPbc	Z	07:18:45.5	149.0	20.3
BRG	e	PKPbc	Z	07:18:46.2	149.2	22.2
MOX	e	PKPbc	Z	07:18:47.9	150.0	18.2
TANN	e	PKPbc	Z	07:18:48.2	150.0	19.9
UBBA	e	PKPbc	Z	07:18:47.6	150.1	15.2
ROTZ	e	PKPbc	Z	07:18:49.9	150.7	19.8
TNS	e	PKPbc	Z	07:18:51.0	150.9	12.5
GRA1	e	PKPbc	Z	07:18:51.0	150.9	18.0
WET	e	PKPbc	Z	07:18:50.4	151.1	21.4
GEC2	e	PKPbc	Z	07:18:51.0	151.2	23.2
WLF	e	PKPbc	Z	07:18:52.6	151.7	8.3
BFO	e	PKPbc	Z	07:18:54.6	152.8	13.1

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/06 07:01:46.4 15.901S 173.420W 33.0G 5.4 SZGRF
 Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
MOX	e	PKPbc	Z 07:21:23.0	145.0	8.5				
	e	SS	E 07:43:13.9						
	e	L	Z 08:19:20.3			22.0	544	5.3	
TANN	e	PKPbc	Z 07:21:24.0	145.2	9.9				
TNS	e	PKPbc	Z 07:21:25.8	145.6	3.2				
ROTZ	e	PKPbc	Z 07:21:26.7	145.8	9.7				
GRA1	e	PKPbc	Z 07:21:27.2	146.0	8.0				
	e	SS	E 07:43:28.7						
	e	L	Z 08:32:38.5			20.3	808	5.5	
WLF	e	PKPbc	Z 07:21:28.5	146.2	359.3				
WET	e	PKPbc	Z 07:21:28.1	146.4	11.0				
GEC2	e	PKPbc	Z 07:21:28.9	146.5	12.5				
STU	e	PKPbc	Z 07:21:30.5	147.1	4.6				
BFO	e	PKPbc	Z 07:21:31.6	147.5	3.1				

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/06

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e	PKPbc	Z 08:41:10.0						
FUR	e	PKPbc	Z 08:41:10.3						
GEC2	e	PKPbc	Z 08:41:05.9						
ROTZ	e	PKPbc	Z 08:41:03.7						
STU	e	PKPbc	Z 08:41:08.2						
TNS	e	PKPbc	Z 08:41:02.6						
WET	e	PKPbc	Z 08:41:06.3						

WLF e PKPbc Z 08:41:05.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/06								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 10:15:20.4							
GEC2	e PKPbc	Z 10:15:12.8							
GRA1	e PKPbc	Z 10:15:15.2							
MOX	e PKPbc	Z 10:15:16.3							
ROTZ	e PKPbc	Z 10:15:15.6							
TANN	e PKPbc	Z 10:15:15.3							
WET	e PKPbc	Z 10:15:13.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/06	10:50:43.9	79.040N	0.200W	24.8	6.6	6.1		SZGRF

Greenland Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 10:56:09.6	25.4	355.4	1.6	5042	7.0		
NRDL	e P	Z 10:56:22.1	26.8	355.7					
IBBN	e P	Z 10:56:23.1	26.9	356.7					
CLZ	e P	Z 10:56:28.4	27.4	355.7	1.9	1899	6.6		
BUG	e P	Z 10:56:30.7	27.7	357.0					
CLL	e P	Z 10:56:33.5	28.1	354.7	1.5	1886	6.7		
UBBA	e P	Z 10:56:37.5	28.5	355.9					
BRG	e P	Z 10:56:38.0	28.6	354.4	1.5	1639	6.6		
MOX	e P	Z 10:56:39.3	28.7	355.4	1.5	1539	6.6		
	e pP	Z 10:56:45.6							
	e S	E 11:01:33.1							
	e L	Z 11:07:31.5			21.7	48172		6.1	
TANN	e P	Z 10:56:41.9	29.0	355.1					
TNS	e P	Z 10:56:41.7	29.0	356.6	1.7	789	6.3		
WLF	e P	Z 10:56:46.3	29.5	357.5					
ROTZ	e P	Z 10:56:47.5	29.6	355.3					
GRA1	e P	Z 10:56:47.9	29.6	355.6	1.9	1726	6.6		
	e pP	Z 10:56:54.2							
	e S	N 11:01:48.1							
	e L	Z 11:08:10.4			21.6	53375		6.1	
WET	e P	Z 10:56:53.7	30.3	355.1	1.6	1425	6.5		
STU	e P	Z 10:56:55.0	30.5	356.5					
GEC2	e P	Z 10:56:56.9	30.6	354.9	1.5	1774	6.8		
BFO	e P	Z 10:56:58.6	30.9	356.8	1.7	852	6.4		
FUR	e P	Z 10:57:01.3	31.2	355.8	1.6	1893	6.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/06	20:03:53.7	17.893S	179.969E	33.0N				SZGRF

Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	20:23:25.3	144.5	16.8					
CLL	e PKPbc	Z	20:23:27.0	145.0	22.0					
IBBN	e PKPbc	Z	20:23:27.3	145.0	13.0					
CLZ	e PKPbc	Z	20:23:27.3	145.1	17.5					
BRG	e PKPbc	Z	20:23:27.5	145.2	23.7					
MOX	e PKPbc	Z	20:23:29.5	146.0	20.1					
BUG	e PKPbc	Z	20:23:29.7	146.0	12.5					
TANN	e PKPbc	Z	20:23:29.8	146.0	21.6					
ROTZ	e PKPbc	Z	20:23:32.1	146.6	21.5					
GRA1	e PKPbc	Z	20:23:32.8	146.9	19.9					
	e PKPab	Z	20:23:35.8							
TNS	e PKPbc	Z	20:23:32.9	147.0	14.9					
WET	e PKPab	Z	20:23:36.5	147.1	23.0					
GEC2	e PKPbc	Z	20:23:33.0	147.1	24.6					
WLF	e PKPbc	Z	20:23:36.2	147.8	11.1					
FUR	e PKPab	Z	20:23:41.6	148.4	20.8					
BFO	e PKPbc	Z	20:23:37.6	148.8	15.5					
	e PKPab	Z	20:23:43.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/07	05:08:34.5	18.390S	178.400W	33.0G				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z	05:28:14.2	145.7	10.4					
CLZ	e PKPbc	Z	05:28:15.2	145.8	14.9					
CLL	e PKPbc	Z	05:28:14.8	145.9	19.5					
BRG	e PKPbc	Z	05:28:15.6	146.1	21.3					
MOX	e PKPbc	Z	05:28:17.4	146.8	17.5					
TANN	e PKPbc	Z	05:28:17.8	146.8	19.1					
ROTZ	e PKPbc	Z	05:28:19.9	147.5	19.0					
TNS	e PKPbc	Z	05:28:20.4	147.7	12.2					
GRA1	e PKPbc	Z	05:28:20.3	147.8	17.3					
GEC2	e PKPbc	Z	05:28:20.9	148.0	22.1					
WLF	e PKPbc	Z	05:28:22.8	148.5	8.3					
STU	e PKPbc	Z	05:28:24.3	149.0	14.1					
FUR	e PKPbc	Z	05:28:24.7	149.2	18.1					
BFO	e PKPbc	Z	05:28:24.6	149.6	12.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/07	10:19: 5.5	19.358S	176.076W	33.0N				SZGRF

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 10:38:38.2	145.1	10.6					
NRDL	e PKPbc	Z 10:38:42.4	146.5	10.6					
CLL	e PKPbc	Z 10:38:44.8	147.3	16.0					
BRG	e PKPbc	Z 10:38:45.7	147.5	17.8					
MOX	e PKPbc	Z 10:38:47.3	148.1	13.8					
TANN	e PKPbc	Z 10:38:47.5	148.2	15.4					
ROTZ	e PKPbc	Z 10:38:49.2	148.9	15.2					
GRA1	e PKPbc	Z 10:38:50.1	149.1	13.5					
WET	e PKPbc	Z 10:38:50.4	149.4	16.7					
GEC2	e PKPbc	Z 10:38:50.3	149.5	18.4					
WLF	e PKPbc	Z 10:38:52.1	149.6	4.2					
FUR	e PKPbc	Z 10:38:52.6	150.6	14.2					
BFO	e PKPbc	Z 10:38:53.6	150.8	8.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/07	14:33: 8.2	42.898N	143.176E	33.7	5.6	5.4		SZGRF

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 14:44:52.1	75.1	33.8	0.9	105	5.9		
CLL	e P	Z 14:44:58.4	76.4	35.2	0.8	71	5.8		
BRG	e P	Z 14:44:58.8	76.4	35.7	1.1	34	5.4		
NRDL	e P	Z 14:44:58.8	76.4	33.4					
CLZ	e P	Z 14:45:01.8	76.8	33.5	0.9	76	5.9		
TANN	e P	Z 14:45:04.0	77.3	34.7					
IBBN	e P	Z 14:45:04.0	77.3	31.8					
MOX	e P	Z 14:45:04.6	77.4	34.2	0.9	32	5.4		
	e pP	Z 14:45:14.2							
	e L	Z 15:23:01.7			20.1	1744		5.4	
UBBA	e P	Z 14:45:07.1	77.8	33.1					
ROTZ	e P	Z 14:45:07.9	77.9	34.4					
GEC2	e P	Z 14:45:08.5	78.1	35.3	0.9	22	5.3		
WET	e P	Z 14:45:09.3	78.2	34.8	1.0	50	5.6		
BUG	e P	Z 14:45:08.8	78.2	31.4					
GRA1	e P	Z 14:45:10.1	78.3	33.8	0.9	92	5.8		
	e pP	Z 14:45:19.9							
	e L	Z 15:23:40.1			20.1	1692		5.4	
TNS	e P	Z 14:45:12.6	78.9	32.0	1.0	38	5.4		
FUR	e P	Z 14:45:16.7	79.6	33.7	0.8	78	5.7		
STU	e P	Z 14:45:17.7	79.8	32.4	0.9	62	5.5		
WLF	e P	Z 14:45:20.7	80.1	30.5					

BFO e P Z 14:45:21.2 80.5 31.8 1.9 139 5.7

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/07

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKP	Z 17:54:09.8							
GEC2	e PKP	Z 17:54:07.0							
GRA1	e PKP	Z 17:54:04.9							
ROTZ	e PKP	Z 17:54:04.9							
TNS	e PKP	Z 17:54:03.6							
WLF	e PKP	Z 17:54:06.1							

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/07 18:51:17.6 40.820N 19.238E 10.0G SZGRF
Albania

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 18:53:25.4	8.9	151.9					
FUR	e Pn	Z 18:53:30.5	9.3	139.4					
WET	e Pn	Z 18:53:32.8	9.5	149.3					
BFO	e Pn	Z 18:53:51.1	10.8	130.1					
MOX	e Pn	Z 18:53:56.5	11.2	148.8					
TNS	e Pn	Z 18:54:08.1	12.0	137.2					

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/08

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z 00:29:13.5							
CLL	e PKP	Z 00:29:12.8							
CLZ	e PKP	Z 00:29:13.2							

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/08

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKPbc	Z 14:06:28.9							
BRG	e PKPbc	Z 14:06:18.7							
BSEG	e PKPbc	Z 14:06:17.5							
CLL	e PKPbc	Z 14:06:19.3							

GEC2	e	PKPbc	Z	14:06:22.9
GRA1	e	PKPbc	Z	14:06:23.9
GTTG	e	PKPbc	Z	14:06:21.5
MOX	e	PKPbc	Z	14:06:21.6
TANN	e	PKPbc	Z	14:06:21.2
TNS	e	PKPbc	Z	14:06:25.6
WET	e	PKPbc	Z	14:06:23.5
WLF	e	PKPbc	Z	14:06:29.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/09	06:01:11.1	15.474N	91.924W	33.0N	5.0			SZGRF

Mexico-Guatemala border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:13:50.8	86.5	289.9	1.1	16	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/09	19:42:16.8	21.953S	175.209W	10.0N		4.8		NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 20:02:01.0	147.7	9.6					
CLL	e PKPbc	Z 20:02:06.8	150.0	15.3					
BRG	e PKPbc	Z 20:02:07.5	150.2	17.3					
MOX	e PKPbc	Z 20:02:08.5	150.8	13.1					
	e L	Z 21:05:20.8			19.9	158		4.8	
TANN	e PKPbc	Z 20:02:09.4	150.9	14.8					
TNS	e PKPbc	Z 20:02:10.7	151.6	7.1					
GRA1	e PKPbc	Z 20:02:11.6	151.8	12.7					
	e L	Z 21:13:18.4			19.1	147		4.8	
GEC2	e PKPbc	Z 20:02:12.4	152.2	17.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/10	04:04:22.3	24.580S	176.270W	33.0N		5.4		SZGRF

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 04:24:10.1	150.2	12.1					
NRDL	e PKPbc	Z 04:24:13.3	151.7	12.3					
IBBN	e PKPbc	Z 04:24:14.8	152.1	7.8					
	e PKPab	Z 04:24:24.3							
CLZ	e PKPbc	Z 04:24:15.3	152.3	13.1					
CLL	e PKPbc	Z 04:24:15.1	152.3	18.4					

BRG	e PKPbc	Z	04:24:15.4	152.6	20.5				
	e PKPab	Z	04:24:26.3						
MOX	e PKPbc	Z	04:24:17.1	153.2	16.1				
TANN	e PKPab	Z	04:24:29.1	153.3	17.9				
ROTZ	e PKPab	Z	04:24:31.2	154.0	17.8				
TNS	e PKPbc	Z	04:24:19.1	154.1	9.9				
	e PKPab	Z	04:24:32.5						
GRA1	e PKPab	Z	04:24:33.4	154.2	15.8				
	e L	Z	05:44:49.4			18.3	479		5.4
WET	e PKPab	Z	04:24:34.4	154.4	19.6				
WLF	e PKPab	Z	04:24:36.2	154.8	5.2				
FUR	e PKPab	Z	04:24:39.6	155.7	16.9				
RJOB	e PKPab	Z	04:24:40.5	155.8	20.4				
BFO	e PKPab	Z	04:24:41.1	156.0	10.3				

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/10 07:10:11.5 11.511N 87.842W 28.2 5.1 4.3
 Near coast of Nicaragua

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	07:22:53.8	87.0	284.3	0.9	17	5.2		
	e pP	Z	07:23:02.1							
	e L	Z	07:56:29.4			21.7	143		4.3	
MOX	e P	Z	07:22:54.6	87.0	284.6	1.0	10	4.9		
	e pP	Z	07:23:02.1							
	e L	Z	07:51:32.5			20.4	116		4.3	
GRA3	e pP	Z	07:23:03.0	87.0	284.4					
GRA2	e pP	Z	07:23:03.2	87.1	284.4					
GRB2	e pP	Z	07:23:03.8	87.4	284.7					
GRC3	e pP	Z	07:23:04.1	87.4	284.6					
GRB5	e pP	Z	07:23:04.8	87.4	284.7					
GRB3	e pP	Z	07:23:04.9	87.5	284.8					
TANN	e pP	Z	07:23:05.6	87.6	285.2					
ROTZ	e pP	Z	07:23:05.1	87.6	285.0					
CLL	e pP	Z	07:23:05.1	87.7	285.6					
WET	e pP	Z	07:23:08.4	88.2	285.6					
BRG	e P	Z	07:23:00.0	88.4	286.3	1.7	26	5.3		
	e pP	Z	07:23:09.3							
GEC2	e P	Z	07:23:02.0	88.8	286.2	1.1	11	5.0		
	e pP	Z	07:23:10.5							

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/11 00:56:2.7 17.541S 178.003W 33.0N
 Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	01:15:28.5	143.0	13.3					
NRDL	e PKPbc	Z	01:15:33.4	144.5	13.4					
IBBN	e PKPbc	Z	01:15:35.4	144.9	9.6					
CLZ	e PKPbc	Z	01:15:35.7	145.1	14.0					
CLL	e PKPbc	Z	01:15:35.4	145.1	18.6					
BRG	e PKPbc	Z	01:15:36.3	145.3	20.3					
TANN	e PKPbc	Z	01:15:38.5	146.1	18.1					
GUNZ	e PKPbc	Z	01:15:38.9	146.1	17.9					
WERN	e PKPbc	Z	01:15:39.3	146.2	18.0					
ROTZ	e PKPbc	Z	01:15:40.8	146.7	17.9					
GRA1	e PKPbc	Z	01:15:41.6	147.0	16.3					
	e L	Z	01:52:43.2			20.0	194		4.9	
GEC2	e PKPbc	Z	01:15:41.6	147.3	21.0					
WLF	e PKPbc	Z	01:15:43.9	147.7	7.4					
STU	e PKPbc	Z	01:15:44.5	148.2	13.1					
FUR	e PKPbc	Z	01:15:44.9	148.5	17.1					
RJOB	e PKPbc	Z	01:15:44.8	148.5	20.0					
BFO	e PKPbc	Z	01:15:45.7	148.8	11.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/11	01:34:16.7	45.534N	17.440E	10.0G			3.1	SZGRF

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OBKA	e Pn	Z	01:34:51.8	2.2	114.9					3.1
	e Sg	N	01:35:27.5							
MOA	e Pn	Z	01:35:05.8	3.2	135.6					3.1
	e Sn	N	01:35:40.9							
KBA	e Pn	Z	01:35:05.6	3.2	117.1					2.8
RJOB	e Pn	Z	01:35:16.0	3.9	122.9					3.3
	e Sn	E	01:35:59.9							
GEC2	e Pn	Z	01:35:19.7	4.2	141.1					2.9
	e Sn	N	01:36:05.9							
WTTA	e Pn	Z	01:35:22.7	4.4	111.3					
WET	e Pn	Z	01:35:27.2	4.8	137.7					3.2
	e Sn	N	01:36:18.4							
DAVA	e Pn	Z	01:35:37.9	5.5	105.8					
ROTZ	e Pn	Z	01:35:38.5	5.5	138.3					
GRA1	e Pn	Z	01:35:43.0	5.9	132.4					
TANN	e Pn	Z	01:35:43.1	5.9	143.8					
	e Sn	E	01:36:45.4							
MOX	e Pn	Z	01:35:50.4	6.4	140.5					
BFO	e Pn	Z	01:35:54.5	6.8	110.8					
TNS	e Pn	Z	01:36:06.7	7.6	124.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/11	02:56:36.6	21.168S	174.240W	33.0N				SZGRF

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	03:16:16.5	147.0	7.8					
CLZ	e PKPbc	Z	03:16:22.3	149.1	8.4					
CLL	e PKPbc	Z	03:16:22.3	149.3	13.3					
BRG	e PKPbc	Z	03:16:23.1	149.6	15.2					
BUG	e PKPbc	Z	03:16:23.1	149.7	2.8					
UBBA	e PKPbc	Z	03:16:23.5	150.2	8.0					
MOX	e PKPbc	Z	03:16:24.4	150.2	11.0					
ROTZ	e PKPbc	Z	03:16:26.3	150.9	12.5					
WLF	e PKPbc	Z	03:16:28.3	151.5	0.8					
GEC2	e PKPbc	Z	03:16:27.7	151.6	15.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/11	12:58:52.8	12.804N	92.550E	33.0G	4.6			SZGRF

Andaman Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	13:10:29.5	74.7	88.1	1.2	8	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/11	17:24:31.1	7.920N	84.670W	26.4	6.1	5.9		SZGRF

Off coast of Costa Rica

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	17:37:02.2	84.5	275.8	2.1	298	6.0		
	e SS	R	17:53:06.3							
BUG	e P	Z	17:37:04.5	85.0	276.5	1.7	187	5.8		
	e SS	R	17:53:13.3							
IBBN	e P	Z	17:37:05.8	85.2	276.8	2.0	360	6.1		
	e SS	R	17:53:14.8							
TNS	e P	Z	17:37:09.3	85.9	277.5	1.7	201	6.0		
	e SS	R	17:53:27.9							
BFO	e P	Z	17:37:09.5	86.1	277.5	1.6	83	5.6		
	e SS	R	17:53:28.7							
BSEG	e P	Z	17:37:12.7	86.5	278.7	2.0	599	6.5		
	e S	R	17:47:29.7							
	e SS	R	17:53:35.6							
STU	e P	Z	17:37:12.5	86.6	278.1	1.8	258	6.2		
	e pP	Z	17:37:20.1							
	e S	R	17:47:28.1							

	e SS	R	17:53:37.1						
NRDL	e P	Z	17:37:13.2	86.6	278.6	1.8	239	6.1	
	e S	R	17:47:31.0						
	e SS	R	17:53:38.5						
UBBA	e P	Z	17:37:14.3	86.8	278.6	2.0	212	6.0	
	e S	R	17:47:32.7						
	e SS	R	17:53:42.2						
CLZ	e P	Z	17:37:14.6	86.9	278.8	1.7	245	6.2	
	e S	R	17:47:33.8						
	e SS	R	17:53:42.2						
GRA1	e P	Z	17:37:18.7	87.7	279.6	1.5	152	6.0	
	e pP	Z	17:37:26.6						
	e S	R	17:47:42.9						
	e SS	R	17:53:55.7						
	e L	Z	18:09:52.7			21.9	6711	6.0	
MOX	e P	Z	17:37:19.1	87.8	279.9	1.8	180	6.0	
	e S	R	17:47:44.0						
	e SS	R	17:53:57.0						
	e L	Z	18:09:57.5			22.0	4134	5.8	
FUR	e P	Z	17:37:20.1	88.0	279.7	2.2	451	6.3	
	e S	R	17:47:45.1						
	e SS	R	17:53:59.1						
ROTZ	e P	Z	17:37:22.2	88.4	280.3	2.1	252	6.1	
	e S	R	17:47:50.0						
	e SS	R	17:54:04.7						
TANN	e P	Z	17:37:22.1	88.4	280.5	1.6	224	6.1	
	e S	R	17:47:49.9						
	e SS	R	17:54:06.0						
CLL	e P	Z	17:37:22.7	88.6	280.9	1.6	202	6.1	
	e S	R	17:47:50.7						
	e SS	R	17:54:06.1						
WET	e P	Z	17:37:24.6	88.9	280.9	1.6	264	6.2	
	e S	R	17:47:54.6						
	e SS	R	17:54:13.2						
RJOB	e P	Z	17:37:25.3	89.1	280.8	1.8	159	6.0	
	e S	R	17:47:56.7						
	e SS	R	17:54:16.3						
BRG	e P	Z	17:37:26.1	89.2	281.7	1.6	179	5.9	
	e pP	Z	17:37:33.8						
	e S	R	17:47:58.2						
	e SS	R	17:54:17.9						
GEC2	e P	Z	17:37:27.2	89.5	281.5	1.6	156	5.9	
	e pP	Z	17:37:34.7						
	e S	R	17:48:00.7						
	e SS	R	17:54:17.9						

2009/03/11 21:04: 4.1 8.770N 82.000W 20.3 5.7 6.0 SZGRF
Panama-Costa Rica border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	21:16:24.3	82.1	274.3	1.1	43	5.5		
	e S	R	21:26:40.1							
BUG	e P	Z	21:16:26.7	82.7	274.9	1.3	79	5.7		
	e S	R	21:26:44.1							
IBBN	e P	Z	21:16:27.7	82.9	275.2	1.2	55	5.6		
	e S	R	21:26:47.1							
TNS	e P	Z	21:16:31.3	83.6	276.0	1.3	72	5.8		
	e S	R	21:26:55.0							
BFO	e P	Z	21:16:31.6	83.7	276.1	1.2	46	5.6		
	e S	R	21:26:54.8							
STU	e P	Z	21:16:34.6	84.2	276.7	1.1	77	5.8		
	e pP	Z	21:16:40.6							
	e S	R	21:27:00.0							
BSEG	e P	Z	21:16:34.7	84.3	277.0	1.1	68	5.8		
	e S	R	21:26:59.5							
NRDL	e P	Z	21:16:35.1	84.3	277.0	1.3	77	5.8		
	e S	R	21:27:00.7							
UBBA	e P	Z	21:16:36.2	84.5	277.1	1.5	35	5.4		
	e S	R	21:27:03.5							
CLZ	e P	Z	21:16:36.5	84.6	277.3	1.2	95	5.9		
	e S	R	21:27:03.7							
GRA1	e P	Z	21:16:40.8	85.4	278.1	1.2	86	5.8		
	e pP	Z	21:16:46.6							
	e S	R	21:27:12.0							
	e L	Z	21:49:10.6			22.0	8931		6.1	
MOX	e P	Z	21:16:41.1	85.5	278.4	1.2	42	5.6		
	e S	R	21:27:12.6							
	e L	Z	21:50:29.7			20.9	5409		5.9	
FUR	e P	Z	21:16:42.1	85.6	278.3	1.3	53	5.6		
	e S	R	21:27:13.1							
ROTZ	e P	Z	21:16:44.1	86.0	278.9	1.5	41	5.3		
	e pP	Z	21:16:49.9							
	e S	R	21:27:17.8							
TANN	e P	Z	21:16:44.1	86.1	279.0	1.2	80	5.7		
	e S	R	21:27:18.1							
CLL	e P	Z	21:16:44.7	86.3	279.4	1.0	82	5.8		
	e S	R	21:27:18.9							
WET	e P	Z	21:16:46.5	86.5	279.4	1.2	115	5.9		
	e S	R	21:27:22.2							
RJOB	e P	Z	21:16:47.4	86.7	279.4	1.4	62	5.6		
	e S	R	21:27:20.8							
BRG	e P	Z	21:16:48.2	86.9	280.1	1.2	60	5.6		
GEC2	e P	Z	21:16:49.3	87.1	280.0	1.3	64	5.6		
	e pP	Z	21:16:55.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/12	23:23:45.4	6.220N	81.770W	33.0G	5.9	6.0		SZGRF

South of Panama

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	23:36:12.5	83.9	272.5	1.6	218	6.1		
BUG	e P	Z	23:36:15.2	84.5	273.1	1.8	280	6.2		
IBBN	e P	Z	23:36:16.5	84.8	273.4	2.2	481	6.3		
TNS	e P	Z	23:36:19.5	85.4	274.2	2.1	408	6.3		
BFO	e P	Z	23:36:19.2	85.4	274.2	1.0	53	5.7		
STU	e P	Z	23:36:22.2	86.0	274.8	1.4	132	5.9		
BSEG	e P	Z	23:36:23.3	86.2	275.4	1.6	243	6.1		
NRDL	e P	Z	23:36:23.7	86.2	275.3	1.5	128	5.8		
UBBA	e P	Z	23:36:24.0	86.3	275.3	1.8	119	5.7		
CLZ	e P	Z	23:36:25.0	86.4	275.5	1.4	177	6.0		
GRA1	e P	Z	23:36:28.5	87.2	276.3	1.3	106	5.8		
MOX	e P	Z	23:36:29.0	87.3	276.6	1.4	72	5.6		
FUR	e P	Z	23:36:29.4	87.4	276.4	2.1	325	6.1		
ROTZ	e P	Z	23:36:31.7	87.8	277.0	2.0	155	6.0		
TANN	e P	Z	23:36:32.0	87.9	277.2	1.4	88	5.9		
CLL	e P	Z	23:36:32.8	88.1	277.6	1.3	67	5.8		
WET	e P	Z	23:36:34.1	88.3	277.6	1.7	166	6.1		
RJOB	e P	Z	23:36:34.3	88.5	277.6	1.8	99	5.7		
BRG	e P	Z	23:36:35.8	88.8	278.3	1.2	50	5.6		
GEC2	e P	Z	23:36:36.3	88.9	278.2	1.9	90	5.7		
WLF	e L	Z	00:08:26.1	83.9	272.5	21.2	7625		6.0	
BUG	e L	Z	00:08:46.2	84.5	273.1	22.0	7045		6.0	
IBBN	e L	Z	00:09:14.4	84.8	273.4	21.8	6526		6.0	
TNS	e L	Z	00:09:00.9	85.4	274.2	21.7	9272		6.1	
BFO	e L	Z	00:10:31.9	85.4	274.2	21.9	4226		5.8	
STU	e L	Z	00:09:46.0	86.0	274.8	21.1	5648		5.9	
BSEG	e L	Z	00:10:26.5	86.2	275.4	21.8	7534		6.1	
CLZ	e L	Z	00:10:05.2	86.4	275.5	21.9	7078		6.0	
GRA1	e L	Z	00:10:16.6	87.2	276.3	21.8	8716		6.1	
MOX	e L	Z	00:10:22.7	87.3	276.6	22.0	9924		6.2	
FUR	e L	Z	00:10:19.8	87.4	276.4	21.6	3434		5.7	
ROTZ	e L	Z	00:10:36.2	87.8	277.0	22.0	10281		6.2	
TANN	e L	Z	00:10:28.5	87.9	277.2	22.0	9642		6.2	
CLL	e L	Z	00:11:07.2	88.1	277.6	22.0	5657		5.9	
WET	e L	Z	00:10:39.1	88.3	277.6	21.3	4524		5.9	
RJOB	e L	Z	00:13:23.5	88.5	277.6	19.9	2373		5.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/12	02:05:40.8	18.992N	65.509W	33.0N	5.2	4.5		SZGRF

Puerto Rico region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	02:16:10.5	63.9	269.0	1.1	22	5.3		
	e L	Z	02:38:18.0			21.0	345		4.5	
BUG	e P	Z	02:16:15.0	64.6	269.0	1.2	16	5.1		
	e L	Z	02:39:37.0			21.4	448		4.6	
IBBN	e P	Z	02:16:17.3	64.9	269.0	1.4	51	5.6		
	e L	Z	02:42:17.0			18.9	618		4.8	
BFO	e P	Z	02:16:19.4	65.3	271.2	1.3	9	4.8		
	e L	Z	02:42:03.9			20.8	174		4.2	
TNS	e P	Z	02:16:20.2	65.3	270.5	1.5	22	5.2		
	e L	Z	02:41:17.7			19.3	293		4.5	
STU	e P	Z	02:16:23.2	65.8	271.7	0.9	13	5.2		
	e L	Z	02:39:17.6			21.0	199		4.3	
UBBA	e P	Z	02:16:26.3	66.3	271.4	1.7	23	5.1		
	e L	Z	02:40:30.0			21.6	280		4.4	
NRDL	e P	Z	02:16:26.4	66.3	270.7	1.1	21	5.3		
	e L	Z	02:43:02.2			19.6	476		4.7	
BSEG	e P	Z	02:16:26.7	66.5	270.3	0.9	23	5.4		
	e L	Z	02:43:55.1			19.2	394		4.6	
CLZ	e P	Z	02:16:27.7	66.5	271.2	0.8	14	5.2		
	e L	Z	02:40:35.7			21.7	518		4.7	
GRA1	e P	Z	02:16:31.6	67.1	272.8	1.4	15	5.0		
	e L	Z	02:39:32.1			21.7	408		4.6	
FUR	e P	Z	02:16:32.5	67.3	273.5	1.3	33	5.4		
	e L	Z	02:43:21.8			20.2	213		4.4	
MOX	e P	Z	02:16:32.3	67.3	272.7	1.8	27	5.2		
	e L	Z	02:40:38.0			21.5	336		4.5	
ROTZ	e P	Z	02:16:35.8	67.8	273.5	0.9	8	5.0		
	e L	Z	02:40:51.0			22.0	305		4.5	
TANN	e P	Z	02:16:36.2	67.9	273.4	1.1	12	5.0		
	e L	Z	02:41:28.8			21.7	280		4.5	
CLL	e P	Z	02:16:37.8	68.2	273.5	0.9	10	5.1		
	e L	Z	02:40:50.5			22.0	394		4.6	
WET	e P	Z	02:16:38.6	68.2	274.3	1.1	11	5.0		
	e L	Z	02:40:16.7			20.8	278		4.5	
RJOB	e L	Z	02:44:26.2	68.3	274.8	20.8	173		4.3	
BRG	e P	Z	02:16:41.9	68.8	274.4	0.9	12	5.1		
	e L	Z	02:41:21.3			21.5	425		4.6	
GEC2	e P	Z	02:16:42.0	68.8	275.0	1.6	18	5.1		
	e L	Z	02:40:44.1			20.5	178		4.3	

Date 2009/03/12
Origin Time 08:25:34.3
Lat 31.552N
Long 105.221E
Depth 33.0G
mb 5.4
Ms
ML
Source SZGRF
Sichuan, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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BRG	e P	Z	08:36:26.9	66.8	68.0	0.8	23	5.5
CLL	e P	Z	08:36:29.0	67.2	67.5	1.0	23	5.4
BSEG	e P	Z	08:36:32.8	67.7	66.6	0.9	101	6.1
GEC2	e P	Z	08:36:33.0	67.7	67.0	1.1	21	5.3
TANN	e P	Z	08:36:33.6	67.8	66.8	0.9	15	5.2
WET	e P	Z	08:36:35.5	68.1	66.6	1.3	21	5.2
MOX	e P	Z	08:36:36.0	68.2	66.3	1.3	20	5.2
ROTZ	e P	Z	08:36:36.7	68.3	66.4	0.9	34	5.5
NRDL	e P	Z	08:36:37.0	68.4	65.9	0.9	43	5.7
CLZ	e P	Z	08:36:37.7	68.5	65.9	0.9	54	5.8
RJOB	e P	Z	08:36:39.4	68.7	66.0	1.8	30	5.2
GRA1	e P	Z	08:36:40.6	68.9	65.7	1.0	34	5.5
UBBA	e P	Z	08:36:41.5	69.1	65.3	1.9	41	5.3
FUR	e P	Z	08:36:44.5	69.5	65.2	1.4	118	5.8
IBBN	e P	Z	08:36:45.5	69.7	64.3	1.1	35	5.4
TNS	e P	Z	08:36:48.5	70.3	64.0	1.0	15	5.1
BUG	e P	Z	08:36:49.5	70.4	63.6	0.9	29	5.4
STU	e P	Z	08:36:49.9	70.5	64.1	1.1	30	5.3
BFO	e P	Z	08:36:53.9	71.2	63.4	1.1	17	5.1
WLF	e P	Z	08:36:58.9	71.8	62.3	1.0	67	5.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/12	10:05: 8.9	4.270N	95.200E	50.8	5.1			SZGRF
Northern Sumatera, Indonesia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
KWP	e P	Z	10:16:47.6	75.5	100.7	1.4	77	5.5		
OJC	e P	Z	10:16:58.7	77.4	98.6	0.8	25	5.4		
OKC	e P	Z	10:17:04.5	78.4	97.2	1.2	22	5.2		
MORC	e P	Z	10:17:06.6	78.8	96.7	1.5	29	5.1		
	e pP	Z	10:17:21.5							
DPC	e P	Z	10:17:11.7	79.6	95.9	1.7	27	4.9		
PRU	e P	Z	10:17:17.1	80.7	94.4	2.0	38	5.1		
BRG	e P	Z	10:17:19.4	81.2	94.1	1.7	27	5.0		
GEC2	e P	Z	10:17:19.8	81.2	93.6	0.9	15	5.0		
	e pP	Z	10:17:34.8							
	e sP	Z	10:17:39.0							
RJOB	e P	Z	10:17:21.9	81.7	92.7	0.9	5	4.7		
WET	e P	Z	10:17:22.5	81.8	93.0	1.8	34	5.2		
CLL	e P	Z	10:17:22.3	81.8	93.4	1.3	14	4.9		
TANN	e P	Z	10:17:24.1	82.1	92.9	1.6	16	4.9		
ROTZ	e P	Z	10:17:25.4	82.2	92.6	1.5	11	4.8		
MOX	e P	Z	10:17:26.9	82.6	92.3	1.5	11	4.9		
GRA1	e P	Z	10:17:28.6	82.9	91.8	0.8	9	5.0		
BSEG	e P	Z	10:17:31.9	83.5	91.6	0.9	25	5.5		
NRDL	e P	Z	10:17:32.2	83.6	91.3	1.4	31	5.3		
UBBA	e P	Z	10:17:32.7	83.7	91.0	2.2	36	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/12	23:04:15.8	17.080S	174.990W	118.9				SZGRF
Tonga Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e PKPbc	Z	23:23:38.3	145.0	9.0					
CLL	e PKPbc	Z	23:23:38.9	145.2	13.5					
	e sPKPbc	Z	23:24:22.6							
BRG	e PKPbc	Z	23:23:39.9	145.5	15.2					
	e pPKPbc	Z	23:24:11.4							
	e sPKPbc	Z	23:24:23.3							
MOX	e PKPbc	Z	23:23:41.6	146.0	11.3					
	e pPKPbc	Z	23:24:12.9							
TANN	e PKPbc	Z	23:23:42.2	146.1	12.9					
	e pPKPbc	Z	23:24:14.8							
TNS	e PKPbc	Z	23:23:43.7	146.7	6.0					
ROTZ	e PKPbc	Z	23:23:44.3	146.8	12.6					
	e pPKPbc	Z	23:24:17.0							
GRA1	e PKPbc	Z	23:23:44.9	147.0	10.9					
WET	e PKPbc	Z	23:23:45.6	147.3	14.0					
WLF	e PKPbc	Z	23:23:46.1	147.4	2.0					
GEC2	e PKPbc	Z	23:23:45.9	147.5	15.6					
FUR	e PKPbc	Z	23:23:48.8	148.5	11.5					
BFO	e PKPbc	Z	23:23:48.6	148.6	6.1					
RJOB	e PKPbc	Z	23:23:49.0	148.7	14.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/13	02:30:57.8	29.300S	177.300W	60.0				NEIC
Kermadec Islands, New Zealand								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	02:51:22.6	158.6	20.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/13	03:26:34.4	21.230S	175.960W	53.4				SZGRF
Tonga Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	03:46:10.3	146.9	10.8					
NRDL	e PKPbc	Z	03:46:14.2	148.4	10.8					
IBBN	e PKPab	Z	03:46:19.1	148.8	6.7					
CLZ	e PKPbc	Z	03:46:16.1	149.0	11.5					

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CLL	e	PKPbc	Z	03:46:16.3	149.1	16.4
	e	pPKPbc	Z	03:46:32.2		
BRG	e	PKPbc	Z	03:46:17.2	149.4	18.3
MOX	e	PKPbc	Z	03:46:18.5	150.0	14.2
	e	pPKPbc	Z	03:46:34.3		
TANN	e	PKPbc	Z	03:46:18.8	150.1	15.9
	e	PKPab	Z	03:46:24.6		
ROTZ	e	PKPbc	Z	03:46:20.2	150.7	15.7
TNS	e	PKPbc	Z	03:46:20.5	150.8	8.4
GRA1	e	PKPbc	Z	03:46:20.9	151.0	13.9
WET	e	PKPbc	Z	03:46:21.3	151.2	17.3
GEC2	e	PKPbc	Z	03:46:21.6	151.3	19.0
BFO	e	PKPbc	Z	03:46:24.5	152.7	8.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/13	07:18:23.6	47.940N	149.380E	33.0N	5.1			SZGRF
Northwest of Kuril Islands, Russia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z	07:29:56.4	73.7	27.1	1.1	12	4.8		
CLL	e P	Z	07:29:57.2	74.0	28.7	1.1	26	5.2		
BRG	e P	Z	07:29:57.9	74.1	29.3	1.2	12	4.8		
CLZ	e P	Z	07:29:59.5	74.3	27.2	1.1	23	5.1		
IBBN	e P	Z	07:30:01.3	74.6	25.6	0.6	23	5.4		
TANN	e P	Z	07:30:03.0	74.9	28.3	0.9	5	4.5		
MOX	e P	Z	07:30:03.4	75.0	27.8	1.1	15	4.9		
ROTZ	e P	Z	07:30:07.0	75.6	28.1	1.0	16	5.1		
WET	e P	Z	07:30:09.3	75.9	28.4	1.0	24	5.3		
GEC2	e P	Z	07:30:08.6	75.9	28.9	1.0	10	4.9		
GRA1	e P	Z	07:30:09.1	75.9	27.4	0.9	35	5.5		
TNS	e P	Z	07:30:10.9	76.2	25.8	0.8	17	5.3		
RJOB	e P	Z	07:30:16.2	77.2	28.2	1.0	15	5.1		
STU	e P	Z	07:30:16.9	77.3	26.1	1.0	23	5.3		
BFO	e P	Z	07:30:20.0	78.0	25.5	1.0	20	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/13	09:07:1.7	43.770N	135.480E	429.7	5.3			SZGRF
Primorye, Russia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	09:17:40.7	71.7	38.5	1.2	75	5.7		
BRG	e P	Z	09:17:45.8	72.6	40.2	1.5	33	5.3		
	e pP	Z	09:19:19.4							
CLL	e P	Z	09:17:45.8	72.7	39.6	1.3	50	5.5		
	e pP	Z	09:19:19.2							

NRDL	e P	Z	09:17:47.4	72.9	38.0	1.2	29	5.3
CLZ	e P	Z	09:17:50.2	73.3	38.1	1.2	50	5.5
TANN	e P	Z	09:17:51.6	73.6	39.1	1.5	31	5.1
	e pP	Z	09:19:25.5					
MOX	e P	Z	09:17:52.4	73.8	38.6	1.2	24	5.1
	e pP	Z	09:19:26.2					
ROTZ	e P	Z	09:17:55.4	74.2	38.9	1.3	37	5.2
UBBA	e P	Z	09:17:55.3	74.3	37.7	1.1	16	5.0
	e pP	Z	09:19:29.3					
GEC2	e P	Z	09:17:55.2	74.3	39.6	1.2	19	5.0
WET	e P	Z	09:17:56.3	74.4	39.2	1.1	24	5.1
	e pP	Z	09:19:30.2					
GRA1	e P	Z	09:17:58.0	74.7	38.2	1.2	74	5.6
	e pP	Z	09:19:31.1					
BUG	e P	Z	09:17:58.2	74.8	36.0	0.9	32	5.3
TNS	e P	Z	09:18:01.4	75.3	36.6	1.3	31	5.2
RJOB	e P	Z	09:18:02.7	75.5	38.9	1.0	24	5.2
FUR	e P	Z	09:18:04.3	75.8	38.0	1.2	48	5.5
STU	e P	Z	09:18:06.1	76.2	36.8	1.2	43	5.4
BFO	e P	Z	09:18:10.0	76.9	36.2	1.2	46	5.5
	e pP	Z	09:19:44.9					

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/13 16:54:40.8 10.134N 82.771W 33.0N 4.9 4.4
 North of Panama SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:07:12.5	84.8	279.6	1.3	11	4.9		
	e L	Z 17:39:20.3			20.8	184		4.4	

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/13 17:33: 7.7 9.037N 85.698W 33.0N 5.1 5.0
 Off coast of Costa Rica SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:45:52.6	87.5	281.1	1.4	16	5.1		
	e L	Z 18:18:31.8			21.8	673		5.0	

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/13 20:42: 1.5 37.451N 71.797E 33.0N 4.3
 Afghanistan-Tajikistan border region SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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GRA1 e P Z 20:50:08.3 44.3 82.1 0.8 5 4.3

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/14 03:04:14.3 19.750S 175.570W 160.6
Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 03:23:33.4	145.5	9.8					
NRDL	e PKPbc	Z 03:23:37.3	147.0	9.8					
CLZ	e PKPbc	Z 03:23:39.4	147.6	10.5					
CLL	e PKPbc	Z 03:23:39.5	147.7	15.2					
	e pPKPbc	Z 03:24:21.5							
BRG	e PKPbc	Z 03:23:40.4	148.0	17.1					
BUG	e PKPbc	Z 03:23:40.6	148.2	5.1					
MOX	e PKPbc	Z 03:23:41.8	148.6	13.1					
UBBA	e PKPbc	Z 03:23:41.9	148.6	10.1					
TANN	e PKPbc	Z 03:23:42.2	148.7	14.7					
ROTZ	e PKPbc	Z 03:23:44.0	149.3	14.5					
TNS	e PKPbc	Z 03:23:43.7	149.4	7.4					
	e PKPab	Z 03:23:49.0							
GRA1	e PKPbc	Z 03:23:44.5	149.6	12.7					
	e PKPab	Z 03:23:49.6							
WET	e PKPab	Z 03:23:51.2	149.8	16.0					
GEC2	e PKPbc	Z 03:23:45.3	150.0	17.6					
WLF	e PKPbc	Z 03:23:45.9	150.1	3.2					
STU	e PKPbc	Z 03:23:47.0	150.7	9.2					
FUR	e PKPbc	Z 03:23:47.7	151.1	13.4					
RJOB	e PKPbc	Z 03:23:47.9	151.2	16.5					
BFO	e PKPbc	Z 03:23:48.0	151.2	7.6					
	e PKPab	Z 03:23:56.5							

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/14

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 10:19:01.7							

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/14 13:26:20.0 30.100N 68.500E 10.0 4.7
Pakistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:34:52.6	46.8	92.5	1.2	7	4.7		

2009/03/15 12:51:34.8 6.500S 147.200E 88.0
Eastern New Guinea, Papua New Guinea, region

NEIC

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 13:10:21.4	123.3	55.7					

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/15 18:08:27.8 30.300S 177.800W 18.0
Kermadec Islands, New Zealand

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 18:29:01.9	159.4	22.7					

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/15 20:28:53.8 15.500S 173.200W 35.0
Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 20:48:28.5	145.6	7.6					
	e L	Z 21:59:14.5			18.7	348		5.2	

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/16 01:38: 1.8 0.471N 18.910W 33.0N 4.6
Central Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:47:34.2	55.5	217.5	0.9	5	4.6		

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/16 07:13:35.3 55.000S 129.600W 10.0
Pacific-Antarctic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 07:33:25.9	155.8	242.2					
	e L	Z 08:41:03.1			20.3	730		5.5	

Date Origin Time Lat Long Depth mb Ms ML Source
2009/03/16 14:05:43.7 26.840S 29.470E 33.0N 4.7
South Africa

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 14:17:40.5	78.2	163.4	1.4	10	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/16	14:15:56.3	3.800N	126.500E	35.0		6.3		NEIC

Talau Islands, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z 14:29:53.3	103.0	67.8					
	e Sdiff	N 14:41:31.7							
	e L	Z 15:26:11.0			19.4	8107		6.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/16	15:22:25.6	53.928N	38.207W	33.0N	4.5			SZGRF

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:28:33.5	30.2	297.3	0.9	8	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/17	00:40:4.6	37.014N	143.183E	59.1N	4.7			SZGRF

Off east coast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:52:25.8	83.5	36.7	1.4	7	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/17	01:12:47.7	41.619N	14.604E	10.0G				SZGRF

Southern Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e Pn	Z 01:14:17.9	6.3	167.5					
	e Sn	N 01:15:24.6							
OBER	e Pn	Z 01:14:21.6	6.6	150.5					
	e Sn	N 01:15:30.8							
GEC2	e Pn	Z 01:14:32.7	7.3	174.6					
	e Sn	E 01:15:47.0							
WET	e Pn	Z 01:14:35.3	7.6	170.2					
	e Sn	N 01:15:53.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source		
2009/03/17	05:49:42.5	21.500S	177.900W	368.0				NEIC		
Fiji Islands region										
Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	06:08:51.5	150.9	17.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source		
2009/03/17	08:56:55.1	20.610S	178.470W	600.0G				SZGRF		
Fiji Islands region										
Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	09:15:28.4	146.0	14.8					
NRDL	e PKPbc	Z	09:15:32.1	147.4	15.0					
IBBN	e PKPbc	Z	09:15:33.8	147.9	11.0					
	e PKPab	Z	09:15:38.0							
CLL	e PKPbc	Z	09:15:33.6	148.0	20.6					
CLZ	e PKPdf	Z	09:15:30.1	148.0	15.8					
	e PKPbc	Z	09:15:34.1							
BRG	e PKPdf	Z	09:15:30.4	148.2	22.4					
	e PKPbc	Z	09:15:34.3							
	e PKPab	Z	09:15:39.1							
BUG	e PKPbc	Z	09:15:35.7	148.8	10.4					
MOX	e PKPdf	Z	09:15:31.3	148.9	18.5					
	e PKPbc	Z	09:15:36.1							
	e PKPbc	Z	09:15:36.3	149.0	20.1					
UBBA	e PKPbc	Z	09:15:36.1	149.1	15.6					
	e PKPab	Z	09:15:42.4							
ROTZ	e PKPbc	Z	09:15:38.0	149.6	20.1					
TNS	e PKPbc	Z	09:15:38.4	149.9	13.0					
GRA1	e PKPbc	Z	09:15:38.5	149.9	18.3					
	e PKPab	Z	09:15:46.4							
WET	e PKPbc	Z	09:15:38.6	150.1	21.7					
	e PKPab	Z	09:15:47.2							
GEC2	e PKPbc	Z	09:15:39.0	150.1	23.3					
WLF	e PKPbc	Z	09:15:40.8	150.7	8.9					
STU	e PKPbc	Z	09:15:41.3	151.2	15.0					
FUR	e PKPbc	Z	09:15:41.6	151.4	19.3					
	e PKPab	Z	09:15:52.5							
RJOB	e PKPbc	Z	09:15:41.3	151.4	22.4					
	e PKPab	Z	09:15:52.9							
BFO	e PKPbc	Z	09:15:42.4	151.7	13.5					
	e PKPab	Z	09:15:53.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/17	08:59:34.1	20.250S	178.420W	600.0G				SZGRF

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 09:18:06.4	145.7	14.6					
NRDL	e PKPbc	Z 09:18:09.8	147.1	14.8					
IBBN	e PKPbc	Z 09:18:11.4	147.6	10.9					
CLZ	e PKPbc	Z 09:18:12.2	147.7	15.6					
CLL	e PKPbc	Z 09:18:11.8	147.7	20.3					
BRG	e PKPdf	Z 09:18:08.8	147.9	22.2					
	e PKPbc	Z 09:18:12.4							
	e PKPab	Z 09:18:17.2							
BUG	e PKPbc	Z 09:18:13.6	148.5	10.3					
MOX	e PKPbc	Z 09:18:14.1	148.6	18.3					
TANN	e PKPbc	Z 09:18:14.5	148.6	19.9					
UBBA	e PKPbc	Z 09:18:14.5	148.7	15.3					
ROTZ	e PKPdf	Z 09:18:12.3	149.3	19.8					
	e PKPbc	Z 09:18:16.1							
TNS	e PKPbc	Z 09:18:16.7	149.5	12.8					
	e PKPab	Z 09:18:24.0							
WET	e PKPab	Z 09:18:24.8	149.7	21.4					
GEC2	e PKPdf	Z 09:18:13.9	149.8	23.1					
	e PKPbc	Z 09:18:17.1							
WLF	e PKPbc	Z 09:18:18.9	150.4	8.7					
FUR	e PKPab	Z 09:18:30.8	151.0	19.0					
RJOB	e PKPbc	Z 09:18:19.7	151.1	22.1					
BFO	e PKPbc	Z 09:18:20.6	151.4	13.3					
	e PKPab	Z 09:18:31.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/17	23:14:47.2	24.616N	66.083E	30.1N	4.7			SZGRF

Pakistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:23:31.3	49.0	99.9	1.4	10	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/18	05:28:20.0	38.400S	145.800E	18.0				NEIC

Near southeast coast of Australia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 05:47:58.4	146.0	88.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/18	09:03:10.3	3.600N	126.700E	35.0		5.1		NEIC
Talaud Islands, Indonesia								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e Pdiff	Z 09:16:57.5	101.2	69.8					
CLL	e Pdiff	Z 09:16:58.5	101.6	68.9					
GEC2	e Pdiff	Z 09:17:01.0	102.1	70.0					
TANN	e Pdiff	Z 09:17:02.1	102.3	68.6					
WET	e Pdiff	Z 09:17:03.2	102.5	69.2					
ROTZ	e Pdiff	Z 09:17:03.6	102.7	68.6					
MOX	e Pdiff	Z 09:17:04.0	102.7	67.9					
NRDL	e Pdiff	Z 09:17:04.9	102.8	66.3					
CLZ	e Pdiff	Z 09:17:05.8	102.9	66.6					
RJOB	e Pdiff	Z 09:17:05.8	103.0	69.5					
GRA1	e Pdiff	Z 09:17:07.3	103.3	67.8					
	e L	Z 10:07:15.1			20.9	544		5.1	
FUR	e Pdiff	Z 09:17:09.6	103.8	68.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/18	16:23:50.5	33.100S	179.600E	250.0				NEIC
South of Kermadec Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 16:44:05.4	161.3	31.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/18	23:09:14.0	3.700N	127.000E	35.0		4.3		NEIC
Talaud Islands, Indonesia								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z 23:23:05.6	103.4	67.5					
	e L	Z 00:12:24.9			18.7	77		4.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/19	05:43:32.1	32.200N	105.200E	16.0	4.5			NEIC
Sichuan, China								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:54:40.9	68.4	65.2	0.8	3	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/19	14:15: 8.9	34.667N	24.448E	10.0G	5.0	3.7		SZGRF

Crete, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e P	Z 14:19:04.1	16.7	139.2	1.0	283	5.3		
WET	e P	Z 14:19:06.1	16.8	145.2	1.1	189	5.2		
ROTZ	e P	Z 14:19:14.8	17.6	144.7	1.5	141	4.9		
GRA1	e P	Z 14:19:18.6	17.9	142.2	1.3	359	5.4		
	e L	Z 14:27:47.6			21.7	456		3.7	
BRG	e P	Z 14:19:18.9	17.9	150.8	1.2	91	4.8		
TANN	e P	Z 14:19:18.7	18.0	146.5	1.1	80	4.7		
MOX	e P	Z 14:19:24.0	18.5	144.8	0.9	29	4.5		
UBBA	e P	Z 14:19:33.2	19.2	141.5	1.6	74	4.7		
TNS	e P	Z 14:19:34.6	19.4	137.1	1.2	94	4.9		
CLZ	e P	Z 14:19:40.1	19.9	144.1	1.0	48	4.7		
WLF	e P	Z 14:19:42.0	20.1	131.3	1.2	125	5.0		
NRDL	e P	Z 14:19:47.2	20.5	144.5	1.0	68	4.9		
BUG	e P	Z 14:19:50.7	20.8	136.9	1.0	75	5.0		
IBBN	e P	Z 14:19:55.7	21.3	139.4	1.7	168	5.1		
BSEG	e P	Z 14:19:59.0	21.7	147.1	1.1	441	5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/19	18:17:40.8	23.000S	174.700W	34.0		7.7		NEIC

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 18:37:27.4	152.9	12.0					
	e L	Z 19:48:33.3			21.9	120463		7.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/19	20:33:58.7	23.300S	174.600W	35.0				NEIC

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 20:53:53.5	153.2	11.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/20	00:13:48.7			N				SZGRF

Tonga Islands region

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Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 00:33:26.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/20	02:10:37.7	23.080S	174.300W	33.0N				SZGRF
Tonga Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z 02:30:26.8	150.7	3.9					
CLZ	e PKPbc	Z 02:30:27.7	151.0	8.9					
CLL	e PKPbc	Z 02:30:27.9	151.2	14.1					
BRG	e PKPbc	Z 02:30:28.7	151.5	16.0					
BUG	e PKPbc	Z 02:30:28.7	151.6	3.0					
	e PKPab	Z 02:30:37.3							
MOX	e PKPbc	Z 02:30:29.9	152.1	11.7					
	e PKPab	Z 02:30:38.7							
TNS	e PKPbc	Z 02:30:31.3	152.8	5.5					
	e PKPab	Z 02:30:42.5							
WLF	e PKPbc	Z 02:30:33.3	153.4	0.9					
STU	e PKPab	Z 02:30:48.2	154.2	7.4					
RJOB	e PKPbc	Z 02:30:36.1	154.7	15.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/20	05:22: 2.9	23.226S	174.696W	33.0N				SZGRF
Tonga Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z 05:41:52.5	150.9	4.6					
CLZ	e PKPbc	Z 05:41:53.1	151.1	9.7					
CLL	e PKPbc	Z 05:41:53.1	151.3	14.9					
BRG	e PKPbc	Z 05:41:53.8	151.6	16.8					
FBE	e PKPbc	Z 05:41:54.3	151.6	15.7					
MOX	e PKPbc	Z 05:41:55.1	152.1	12.5					
PLN	e PKPbc	Z 05:41:55.5	152.2	13.6					
WERD	e PKPbc	Z 05:41:55.4	152.2	13.9					
TANN	e PKPbc	Z 05:41:55.4	152.2	14.2					
GUNZ	e PKPbc	Z 05:41:55.7	152.3	14.0					
WERN	e PKPbc	Z 05:41:55.9	152.4	14.1					
TNS	e PKPbc	Z 05:41:56.9	152.9	6.3					
WLF	e PKPbc	Z 05:41:58.9	153.6	1.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/20	06:52:20.9	43.802N	145.104E	43.4N	5.2			SZGRF

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	07:03:57.7	74.9	32.0	1.0	58	5.6		
CLL	e P	Z	07:04:04.5	76.2	33.5	1.0	39	5.5		
BRG	e P	Z	07:04:04.7	76.3	34.0	1.2	20	5.1		
CLZ	e P	Z	07:04:07.7	76.7	31.8	1.6	69	5.5		
IBBN	e P	Z	07:04:09.8	77.1	30.1	1.2	40	5.4		
TANN	e P	Z	07:04:09.9	77.2	33.0	1.4	16	4.9		
MOX	e P	Z	07:04:10.5	77.3	32.5	0.8	11	5.0		
ROTZ	e P	Z	07:04:14.0	77.8	32.7	1.0	14	5.1		
BUG	e P	Z	07:04:14.5	78.0	29.7	1.1	24	5.2		
WET	e P	Z	07:04:15.4	78.1	33.1	1.2	30	5.3		
GRA1	e P	Z	07:04:16.1	78.2	32.1	1.0	35	5.4		
TNS	e P	Z	07:04:18.4	78.7	30.3	0.9	9	4.8		
RJOB	e P	Z	07:04:22.1	79.3	32.9	0.9	22	5.1		
FUR	e P	Z	07:04:22.9	79.5	32.0	1.2	53	5.3		
STU	e P	Z	07:04:23.8	79.7	30.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/20	10:34:57.3	47.606N	153.190E	33.0G	4.8			SZGRF

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	10:46:28.5	73.7	25.1	0.4	8	5.1		
CLL	e P	Z	10:46:37.2	75.4	26.5	1.0	13	5.0		
CLZ	e P	Z	10:46:39.3	75.6	24.9	0.8	8	4.9		
TANN	e P	Z	10:46:43.0	76.3	26.1	2.1	28	5.0		
MOX	e P	Z	10:46:43.1	76.3	25.5	1.0	5	4.6		
ROTZ	e P	Z	10:46:47.0	77.0	25.8	0.9	7	4.8		
GRA1	e P	Z	10:46:48.9	77.3	25.2	1.0	19	5.2		
WET	e P	Z	10:46:49.0	77.3	26.2	1.1	9	4.8		
TNS	e P	Z	10:46:50.2	77.6	23.5	0.8	6	4.8		
RJOB	e P	Z	10:46:56.1	78.6	26.0	0.9	6	4.6		
BFO	e P	Z	10:46:59.6	79.3	23.3	0.9	7	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/20	11:23:37.9	22.650S	174.540W	33.0G		5.3		SZGRF

Tonga Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	11:43:21.5	148.5	8.6					
	e PKPab	Z	11:43:24.3							
IBBN	e PKPbc	Z	11:43:25.9	150.3	4.3					
CLZ	e PKPbc	Z	11:43:26.7	150.6	9.3					

CLL	e	PKPbc	Z	11:43:26.8	150.8	14.4				
BRG	e	PKPbc	Z	11:43:27.5	151.0	16.3				
BUG	e	PKPbc	Z	11:43:27.8	151.2	3.5				
	e	PKPab	Z	11:43:35.6						
MOX	e	PKPbc	Z	11:43:28.9	151.6	12.0				
TANN	e	PKPbc	Z	11:43:29.2	151.7	13.7				
TNS	e	PKPbc	Z	11:43:30.7	152.3	5.9				
	e	PKPab	Z	11:43:41.1						
ROTZ	e	PKPbc	Z	11:43:30.8	152.4	13.5				
	e	PKPab	Z	11:43:40.4						
GRA1	e	PKPbc	Z	11:43:31.8	152.6	11.6				
	e	L	Z	13:00:03.2			19.1	455		5.3
WET	e	PKPbc	Z	11:43:31.6	152.9	15.1				
	e	PKPab	Z	11:43:43.1						
WLF	e	PKPab	Z	11:43:44.2	153.0	1.4				
BFO	e	PKPab	Z	11:43:48.8	154.2	6.1				
RJOB	e	PKPab	Z	11:43:49.2	154.2	15.7				

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/20 12:26: 4.0 21.680S 179.120W 635.2 SZGRF
 Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	PKPbc	Z	12:44:36.5	147.0	16.2				
	e	pPKPbc	Z	12:47:00.6						
CLL	e	PKPbc	Z	12:44:41.5	148.9	22.2				
	e	PKPab	Z	12:44:47.5						
	e	pPKPbc	Z	12:47:05.5						
IBBN	e	PKPbc	Z	12:44:41.5	148.9	12.4				
	e	pPKPbc	Z	12:47:05.6						
CLZ	e	PKPbc	Z	12:44:41.9	149.0	17.3				
	e	pPKPbc	Z	12:47:06.0						
BRG	e	PKPbc	Z	12:44:42.0	149.1	24.1				
	e	PKPab	Z	12:44:48.4						
	e	pPKPbc	Z	12:47:06.2						
BUG	e	PKPbc	Z	12:44:43.5	149.8	11.9				
	e	PKPab	Z	12:44:50.3						
	e	pPKPbc	Z	12:47:07.7						
MOX	e	PKPbc	Z	12:44:43.7	149.8	20.2				
	e	PKPab	Z	12:44:51.4						
	e	pPKPbc	Z	12:47:07.8						
TANN	e	PKPbc	Z	12:44:44.0	149.9	21.8				
	e	PKPab	Z	12:44:51.9						
	e	pPKPbc	Z	12:47:08.1						
ROTZ	e	PKPbc	Z	12:44:45.5	150.5	21.8				
	e	pPKPbc	Z	12:47:09.6						
GRA1	e	PKPbc	Z	12:44:46.1	150.8	20.0				

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	e	PKPab	Z	12:44:56.2				
	e	pPKPbc	Z	12:47:09.9				
TNS	e	PKPbc	Z	12:44:46.2	150.8	14.5		
	e	PKPab	Z	12:44:55.5				
	e	pPKPbc	Z	12:47:10.3				
WET	e	PKPbc	Z	12:44:46.2	150.9	23.4		
	e	PKPab	Z	12:44:56.7				
WLF	e	PKPbc	Z	12:44:48.5	151.7	10.4		
	e	pPKPbc	Z	12:47:12.8				
STU	e	PKPbc	Z	12:44:48.9	152.1	16.7		
	e	PKPab	Z	12:45:01.1				
	e	pPKPbc	Z	12:47:13.1				
RJOB	e	PKPbc	Z	12:44:48.8	152.2	24.3		
	e	PKPab	Z	12:45:02.4				
	e	pPKPbc	Z	12:47:12.9				
FUR	e	PKPbc	Z	12:44:49.2	152.2	21.1		
	e	PKPab	Z	12:45:02.1				
	e	pPKPbc	Z	12:47:13.2				
BFO	e	PKPbc	Z	12:44:49.9	152.7	15.2		
	e	PKPab	Z	12:45:03.4				
	e	pPKPbc	Z	12:47:14.2				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/21	04:50:33.5	22.138S	173.953W	33.0N				SZGRF
Tonga Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e	PKPbc	Z 05:10:18.6	149.1	14.0				
IBBN	e	PKPbc	Z 05:10:20.7	149.8	3.2				
CLZ	e	PKPbc	Z 05:10:21.4	150.1	8.1				
CLL	e	PKPbc	Z 05:10:21.5	150.3	13.1				
NEUB	e	PKPbc	Z 05:10:22.3	150.6	10.9				
BRG	e	PKPbc	Z 05:10:22.3	150.6	15.0				
FBE	e	PKPbc	Z 05:10:22.8	150.7	13.9				
BUG	e	PKPbc	Z 05:10:22.4	150.7	2.3				
MOX	e	PKPbc	Z 05:10:23.4	151.2	10.7				
PLN	e	PKPbc	Z 05:10:23.9	151.3	11.8				
WERD	e	PKPbc	Z 05:10:23.7	151.3	12.1				
TANN	e	PKPbc	Z 05:10:23.8	151.3	12.4				
TNS	e	PKPbc	Z 05:10:25.4	151.9	4.7				
WLF	e	PKPbc	Z 05:10:27.2	152.5	0.2				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/21	06:07:49.7	23.000S	175.830W	33.0N				SZGRF
Tonga Islands region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z	06:27:38.5	150.6	6.7					
	e PKPab	Z	06:27:45.2							
CLZ	e PKPbc	Z	06:27:39.2	150.8	11.7					
CLL	e PKPbc	Z	06:27:39.1	150.9	16.9					
BRG	e PKPbc	Z	06:27:39.8	151.1	18.9					
	e PKPab	Z	06:27:47.0							
BUG	e PKPbc	Z	06:27:40.2	151.5	6.0					
MOX	e PKPbc	Z	06:27:41.2	151.8	14.6					
TANN	e PKPbc	Z	06:27:41.5	151.8	16.3					
	e PKPab	Z	06:27:50.4							
ROTZ	e PKPbc	Z	06:27:43.0	152.5	16.2					
TNS	e PKPbc	Z	06:27:43.2	152.6	8.6					
	e PKPab	Z	06:27:53.3							
GRA1	e PKPbc	Z	06:27:43.5	152.7	14.3					
WET	e PKPab	Z	06:27:55.1	153.0	17.9					
WLF	e PKPab	Z	06:27:57.0	153.3	4.1					
STU	e PKPab	Z	06:27:58.9	153.9	10.6					
FUR	e PKPbc	Z	06:27:46.4	154.2	15.2					
	e PKPab	Z	06:28:00.3							
RJOB	e PKPab	Z	06:28:01.2	154.3	18.6					
BFO	e PKPbc	Z	06:27:47.0	154.5	8.9					
	e PKPab	Z	06:28:01.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/21	12:06:38.7	22.428S	176.875W	33.0G				SZGRF
South of Fiji Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	12:26:29.7	149.5	12.8					
CLZ	e PKPbc	Z	12:26:31.8	150.1	13.5					
CLL	e PKPbc	Z	12:26:31.4	150.1	18.6					
BRG	e PKPbc	Z	12:26:32.0	150.3	20.5					
BUG	e PKPbc	Z	12:26:33.3	150.8	7.9					
MOX	e PKPbc	Z	12:26:33.7	151.0	16.4					
TANN	e PKPbc	Z	12:26:33.9	151.1	18.1					
ROTZ	e PKPbc	Z	12:26:35.5	151.7	17.9					
TNS	e PKPbc	Z	12:26:36.1	151.9	10.5					
GEC2	e PKPbc	Z	12:26:36.4	152.3	21.4					
WLF	e PKPbc	Z	12:26:38.2	152.7	6.1					
FUR	e PKPbc	Z	12:26:39.7	153.5	17.1					
BFO	e PKPbc	Z	12:26:39.9	153.8	10.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2009/03/21 19:58:17.3
Ryukyu Islands, Japan

26.000N 128.500E 14.0 4.6 NEIC

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:11:01.1	86.1	53.2	0.8	4	4.6		

Date Origin Time
2009/03/21 20:28:15.4
North Island, New Zealand

Lat Long Depth mb Ms ML Source
38.000S 177.000E 164.0 NEIC

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z 20:48:42.5	161.6	35.2					
BRG	e PKP	Z 20:48:46.1	162.4	49.5					
CLL	e PKP	Z 20:48:46.5	162.6	46.5					
CLZ	e PKP	Z 20:48:50.1	163.3	39.3					
MOX	e PKP	Z 20:48:51.6	163.7	45.0					
IBBN	e PKP	Z 20:48:52.1	163.8	31.9					
ROTZ	e PKP	Z 20:48:53.5	164.0	48.5					
GRA1	e PKP	Z 20:48:55.7	164.5	46.4					
TNS	e PKP	Z 20:48:58.9	165.3	38.1					
STU	e PKP	Z 20:49:02.5	166.1	43.8					
WLF	e PKP	Z 20:49:04.8	166.6	32.8					
BFO	e PKP	Z 20:49:05.5	166.8	42.7					

Date Origin Time
2009/03/21 23:22:44.4
Mid-Indian Ridge

Lat Long Depth mb Ms ML Source
14.688S 64.942E 33.0N 4.9 SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e P	Z 23:34:45.0	78.9	127.4	1.1	40	5.3		
ROTZ	e P	Z 23:34:47.3	79.4	128.4	1.2	5	4.4		
TANN	e P	Z 23:34:49.2	79.6	128.7	1.3	8	4.6		
GRA1	e P	Z 23:34:49.9	79.8	127.6	1.4	29	5.0		
CLL	e P	Z 23:34:50.6	79.9	129.3	1.5	21	4.8		
MOX	e P	Z 23:34:52.3	80.2	128.1	1.4	18	4.8		
STU	e P	Z 23:34:52.8	80.3	125.8	1.5	22	4.9		
BFO	e P	Z 23:34:54.0	80.5	125.0	1.5	14	4.7		
UBBA	e P	Z 23:34:57.2	81.1	126.7	1.3	13	4.8		
CLZ	e P	Z 23:34:59.7	81.5	127.2	1.1	23	5.1		
TNS	e P	Z 23:34:59.7	81.6	125.4	1.7	30	5.1		
WLF	e P	Z 23:35:04.6	82.5	123.4	1.3	20	5.1		
BUG	e P	Z 23:35:06.7	82.9	124.5	1.5	28	5.3		
IBBN	e P	Z 23:35:07.8	83.1	125.0	1.0	8	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/22	01:54:43.3	24.602S	172.288W	33.0N				SZGRF

South of Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z 02:14:36.8	152.3	0.1					
CLZ	e PKPbc	Z 02:14:37.6	152.7	5.3					
CLL	e PKPbc	Z 02:14:37.7	153.0	10.6					
BUG	e PKPbc	Z 02:14:38.3	153.2	359.1					
BRG	e PKPbc	Z 02:14:38.5	153.3	12.7					
FBE	e PKPbc	Z 02:14:38.9	153.3	11.5					
MOX	e PKPbc	Z 02:14:39.5	153.8	8.1					
PLN	e PKPbc	Z 02:14:40.0	153.9	9.2					
WERD	e PKPbc	Z 02:14:40.0	153.9	9.5					
TANN	e PKPbc	Z 02:14:40.0	153.9	9.9					
GRC4	e PKPbc	Z 02:14:42.9	155.3	8.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/22	05:03:1.3	18.632S	14.587W	33.0N	4.4			SZGRF

Southern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:14:22.4	72.0	205.7	1.2	4	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/22	05:38:46.8	11.380S	15.308W	33.0N	4.9			SZGRF

Ascension Island region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:49:26.3	65.4	208.8	1.5	11	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/22	05:52:47.0	10.739S	12.586W	33.0N	5.3	4.5		SZGRF

Ascension Island region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z 06:03:03.6	61.9	203.4	1.4	28	5.3		
STU	e P	Z 06:03:07.9	62.5	204.3	1.3	32	5.4		
FUR	e P	Z 06:03:08.8	62.6	206.6	1.7	68	5.6		
TNS	e P	Z 06:03:15.3	63.7	203.2	1.4	30	5.2		
GEC2	e P	Z 06:03:17.4	63.9	209.0	2.0	43	5.3		
GRA1	e P	Z 06:03:17.2	63.9	206.2	1.2	17	5.1		

	e L	Z	06:45:21.2			20.6	354		4.5
WET	e P	Z	06:03:17.2	63.9	208.0	1.1	16	5.1	
ROTZ	e P	Z	06:03:19.1	64.3	207.2	1.5	28	5.3	
UBBA	e P	Z	06:03:21.5	64.6	204.7	1.7	34	5.3	
MOX	e P	Z	06:03:23.3	64.9	206.4	1.3	19	5.2	
TANN	e P	Z	06:03:23.6	64.9	207.3	1.2	15	5.1	
IBBN	e P	Z	06:03:26.9	65.4	202.1	1.4	33	5.4	
CLZ	e P	Z	06:03:28.2	65.6	204.9	2.1	46	5.3	
NRDL	e P	Z	06:03:32.1	66.2	204.5	1.3	29	5.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/22	06:06:30.6	14.415S	14.742W	33.0N	5.0			SZGRF
Southern Mid-Atlantic Ridge								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:17:27.4	68.1	207.2	1.3	14	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/22	08:02:31.0	12.395S	14.473W	33.0N	5.0	4.4		SZGRF
Southern Mid-Atlantic Ridge								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:13:15.0	66.1	207.6	1.5	17	5.0		
	e L	Z 08:41:00.1			21.1	259		4.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/22	12:55: 3.8	11.607S	12.662W	33.0G	5.3	4.4		SZGRF
Ascension Island region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z 13:05:26.2	62.8	203.2	1.1	31	5.3		
STU	e P	Z 13:05:30.2	63.4	204.1	1.2	26	5.3		
FUR	e P	Z 13:05:31.0	63.4	206.4	0.9	35	5.5		
WLF	e P	Z 13:05:30.7	63.5	200.7	1.9	55	5.4		
RJOB	e P	Z 13:05:31.0	63.5	208.1	1.3	12	4.9		
TNS	e P	Z 13:05:37.8	64.5	203.0	1.3	44	5.5		
GEC2	e P	Z 13:05:39.9	64.8	208.7	1.5	28	5.3		
WET	e P	Z 13:05:39.7	64.8	207.8	1.2	30	5.4		
GRA1	e P	Z 13:05:39.5	64.8	206.0	1.2	23	5.3		
	e L	Z 13:36:23.8			19.0	220		4.4	
ROTZ	e P	Z 13:05:42.0	65.1	207.0	1.3	30	5.4		
BUG	e P	Z 13:05:42.8	65.4	201.6	1.0	19	5.2		
UBBA	e P	Z 13:05:44.4	65.5	204.5	1.6	32	5.3		

MOX	e P	Z	13:05:45.7	65.8	206.2	1.2	24	5.3
TANN	e P	Z	13:05:46.0	65.8	207.1	1.2	21	5.2
IBBN	e P	Z	13:05:49.2	66.3	201.9	1.3	46	5.6
CLZ	e P	Z	13:05:50.5	66.5	204.7	1.6	34	5.3
BRG	e P	Z	13:05:51.3	66.6	208.5	1.3	15	5.1
CLL	e P	Z	13:05:51.9	66.7	207.5	2.6	72	5.4
NRDL	e P	Z	13:05:54.6	67.0	204.3	1.3	33	5.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/22	19:34:18.9	5.400S	151.900E	48.0		5.1		NEIC

New Britain, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z 19:53:10.8	122.7	52.4					
CLL	e PKP	Z 19:53:11.2	122.8	51.2					
GEC2	e PKP	Z 19:53:13.6	124.0	53.2					
ROTZ	e PKP	Z 19:53:13.9	124.2	51.1					
WET	e PKP	Z 19:53:13.9	124.3	52.2					
GRA1	e PKP	Z 19:53:15.1	124.7	50.2					
	e L	Z 20:48:29.7			21.6	434		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/22								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPab	Z 20:22:10.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/23	04:28:18.7	9.693N	58.889E	33.0G	5.3	4.5		SZGRF

Carlsberg Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:37:55.1	56.1	118.6	1.9	67	5.3		
	e L	Z 05:07:19.9			22.0	389		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/23	04:43:32.9	22.826S	173.211W	33.0N				SZGRF

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z 05:03:22.2	150.5	1.8					

CLZ	e	PKPbc	Z	05:03:22.9	150.9	6.8
CLL	e	PKPbc	Z	05:03:23.0	151.1	11.9
NEUB	e	PKPbc	Z	05:03:23.6	151.4	9.6
BUG	e	PKPbc	Z	05:03:23.7	151.4	0.9
BRG	e	PKPbc	Z	05:03:23.9	151.4	13.9
FBE	e	PKPbc	Z	05:03:24.0	151.4	12.7
MOX	e	PKPbc	Z	05:03:24.9	151.9	9.5
PLN	e	PKPbc	Z	05:03:25.3	152.0	10.6
WERD	e	PKPbc	Z	05:03:25.1	152.0	10.9
TANN	e	PKPbc	Z	05:03:25.3	152.1	11.2
GUNZ	e	PKPbc	Z	05:03:25.5	152.1	11.0
WERN	e	PKPbc	Z	05:03:25.9	152.2	11.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/23	14:58:14.9	5.737N	94.892E	66.2N	5.2			SZGRF
Northern Sumatera, Indonesia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OJC	e P	Z	15:09:54.8	76.1	97.9	0.7	27	5.5		
MORC	e P	Z	15:10:02.9	77.5	96.0	1.5	30	5.2		
DPC	e P	Z	15:10:08.1	78.3	95.2	0.7	9	5.0		
BRG	e P	Z	15:10:16.1	79.8	93.4	0.7	10	4.9		
FBE	e P	Z	15:10:18.1	80.2	92.9	0.7	12	4.9		
WET	e P	Z	15:10:19.3	80.4	92.3	1.3	16	4.8		
RJOB	e P	Z	15:10:18.5	80.4	92.0	1.6	21	4.8		
CLL	e P	Z	15:10:19.0	80.5	92.7	1.1	9	4.6		
ROTZ	e P	Z	15:10:22.2	80.9	91.9	1.5	21	4.9		
PLN	e P	Z	15:10:21.8	81.0	91.9	0.8	33	5.4		
MOX	e P	Z	15:10:23.8	81.3	91.5	0.6	4	4.7		
GRA1	e P	Z	15:10:25.3	81.5	91.1	1.4	33	5.3		
CLZ	e P	Z	15:10:28.1	82.1	90.7	0.8	21	5.3		
BSEG	e P	Z	15:10:28.7	82.2	91.0	1.5	78	5.6		
BFO	e P	Z	15:10:34.5	83.4	88.7	0.7	6	4.9		
HLG	e P	Z	15:10:35.3	83.6	89.1	1.0	350	6.5		
IBBN	e P	Z	15:10:34.8	83.7	88.7	1.0	72	5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/24	23:28:29.0	5.200S	151.800E	48.0		5.4		NEIC
New Britain, Papua New Guinea, region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z	23:47:18.4	122.1	47.1					
BRG	e PKPdf	Z	23:47:18.9	122.4	52.3					
CLL	e PKPdf	Z	23:47:19.1	122.6	51.2					
TANN	e PKPdf	Z	23:47:20.8	123.5	51.1					

CLZ	e	PKPdf	Z	23:47:21.4	123.5	48.1						
MOX	e	PKPdf	Z	23:47:21.2	123.7	50.1						
ROTZ	e	PKPdf	Z	23:47:21.8	124.0	51.1						
WET	e	PKPdf	Z	23:47:21.9	124.0	52.1						
IBBN	e	PKPdf	Z	23:47:22.7	124.4	45.1						
GRA1	e	PKPdf	Z	23:47:22.6	124.5	50.1						
RJOB	e	PKPdf	Z	23:47:23.1	124.9	52.8						
BUG	e	PKPdf	Z	23:47:24.0	125.2	45.0						
FUR	e	PKPdf	Z	23:47:24.4	125.5	51.0						
TNS	e	PKPdf	Z	23:47:25.0	125.5	46.9						
STU	e	PKPdf	Z	23:47:25.8	126.1	48.5						
BFO	e	PKPdf	Z	23:47:27.0	126.9	47.8						
WLF	e	PKPdf	Z	23:47:28.2	127.0	44.7						
GRA1	e	L	Z	00:44:13.0	124.5	50.1	21.2	974			5.4	

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/24 04:35:38.6 3.903N 94.111E 33.0G 5.3
 Off west coast of northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	04:47:48.9	80.8	94.7	1.0	30	5.3		
BRG	e P	Z	04:47:48.7	80.8	95.2	1.0	19	5.1		
RJOB	e P	Z	04:47:51.0	81.3	93.8	1.1	14	4.9		
WET	e P	Z	04:47:51.8	81.3	94.1	1.2	24	5.1		
CLL	e P	Z	04:47:51.4	81.4	94.5	1.0	18	5.0		
TANN	e P	Z	04:47:53.4	81.7	94.0	1.1	10	4.8		
ROTZ	e P	Z	04:47:54.7	81.8	93.7	1.9	65	5.4		
MOX	e P	Z	04:47:56.3	82.2	93.3	1.3	16	5.0		
GRA1	e P	Z	04:47:58.0	82.4	92.9	0.8	21	5.3		
CLZ	e P	Z	04:48:00.8	83.1	92.5	1.0	26	5.4		
BSEG	e P	Z	04:48:01.4	83.2	92.7	1.0	68	5.8		
NRDL	e P	Z	04:48:01.8	83.3	92.4	1.6	57	5.6		
STU	e P	Z	04:48:04.0	83.7	91.2	0.6	14	5.3		
TNS	e P	Z	04:48:07.0	84.2	90.8	1.1	14	5.1		
BFO	e P	Z	04:48:06.8	84.3	90.6	0.9	13	5.2		
IBBN	e P	Z	04:48:09.2	84.7	90.5	1.1	38	5.5		
BUG	e P	Z	04:48:10.7	85.0	90.0	0.9	25	5.4		
WLF	e P	Z	04:48:14.8	85.7	89.0	1.4	40	5.3		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/24 12:34:53.8 13.034N 44.056W 33.0N 5.4 4.3
 Northern Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z	12:44:27.6	55.7	249.1	2.7	143	5.5		

BUG	e P	Z	12:44:30.9	56.2	246.2	1.7	106	5.6			
STU	e P	Z	12:44:32.2	56.4	249.6	1.2	34	5.2			
TNS	e P	Z	12:44:33.0	56.4	248.1	1.8	59	5.3			
IBBN	e P	Z	12:44:35.5	56.9	246.1	2.3	311	5.9			
FUR	e P	Z	12:44:40.4	57.5	251.9	1.9	142	5.7			
UBBA	e P	Z	12:44:40.5	57.6	249.1	2.2	85	5.4			
GRA1	e P	Z	12:44:43.1	57.9	250.9	1.5	30	5.1			
	e L	Z	13:04:02.8			21.9	281			4.3	
NRDL	e P	Z	12:44:45.6	58.3	248.2	1.8	111	5.6			
MOX	e P	Z	12:44:47.1	58.5	250.7	2.0	48	5.2			
ROTZ	e P	Z	12:44:47.8	58.6	251.7	1.8	24	4.9			
WET	e P	Z	12:44:49.2	58.8	252.7	2.1	62	5.3			
BSEG	e P	Z	12:44:49.6	58.9	247.6	2.2	362	6.0			
TANN	e P	Z	12:44:50.4	58.9	251.6	2.2	74	5.3			
CLL	e P	Z	12:44:54.3	59.5	251.6	2.4	124	5.5			

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/24

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 18:32:43.5							

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/25 06:31:38.9
 Samoa Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e PKPbc	Z 06:51:09.6	144.4	4.4					
	e pPKPbc	Z 06:51:20.3							
CLL	e PKPbc	Z 06:51:10.3	144.7	8.8					
	e pPKPbc	Z 06:51:20.9							
BUG	e PKPbc	Z 06:51:10.7	144.9	359.3					
	e pPKPbc	Z 06:51:21.4							
BRG	e PKPbc	Z 06:51:11.6	145.1	10.5					
	e pPKPbc	Z 06:51:22.3							
UBBA	e PKPbc	Z 06:51:12.7	145.4	3.9					
MOX	e PKPbc	Z 06:51:13.1	145.5	6.6					
	e pPKPbc	Z 06:51:23.8							
	e L	Z 07:47:21.0			19.3	229		5.0	
TANN	e PKPbc	Z 06:51:13.7	145.7	8.1					
	e pPKPbc	Z 06:51:24.5							
TNS	e PKPbc	Z 06:51:14.8	146.1	1.3					
ROTZ	e PKPbc	Z 06:51:15.9	146.3	7.8					
	e pPKPbc	Z 06:51:26.7							
GRA1	e PKPbc	Z 06:51:16.3	146.5	6.1					

	e pPKPbc	Z	06:51:27.0							
	e L	Z	07:47:49.4			20.4	180	4.8		
WLF	e PKPbc	Z	06:51:16.9	146.6	357.3					
	e pPKPbc	Z	06:51:27.8							
WET	e PKPbc	Z	06:51:17.2	146.9	9.1					
	e pPKPbc	Z	06:51:28.0							
GEC2	e PKPbc	Z	06:51:17.7	147.1	10.6					
	e pPKPbc	Z	06:51:28.6							
STU	e pPKPbc	Z	06:51:29.6	147.5	2.6					
BFO	e PKPbc	Z	06:51:20.0	148.0	1.1					
	e PKPab	Z	06:51:23.5							
	e pPKPbc	Z	06:51:30.9							
FUR	e PKPbc	Z	06:51:20.3	148.0	6.5					
	e pPKPbc	Z	06:51:31.1							
RJOB	e PKPbc	Z	06:51:20.8	148.3	9.3					
	e pPKPbc	Z	06:51:31.6							

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/25 12:23:23.4 40.300N 19.700E 10.0G
 Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e Pn	Z	12:25:33.2	8.9	143.8					
GEC2	e Pn	Z	12:25:40.3	9.5	151.3					
WET	e Pn	Z	12:25:47.4	10.1	148.8					
ROTZ	e Pn	Z	12:25:57.1	10.8	148.1					
GRA1	e Pn	Z	12:26:02.1	11.1	144.4					
STU	e Pn	Z	12:26:03.5	11.3	134.7					
MOX	e Pn	Z	12:26:10.2	11.8	148.3					
BUG	e Pn	Z	12:26:39.0	14.1	137.5					

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/25 17:27:42.3 20.009S 170.388E 160.9
 Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e PKPbc	Z	17:46:57.5	144.6	33.6					
TANN	e PKPbc	Z	17:46:58.6	144.9	37.9					
IBBN	e PKPbc	Z	17:46:58.9	145.0	29.3					
	e pPKPbc	Z	17:47:40.7							
MOX	e PKPbc	Z	17:46:59.0	145.1	36.5					
UBBA	e PKPbc	Z	17:47:00.7	145.5	33.9					
ROTZ	e PKPbc	Z	17:47:00.9	145.6	38.1					
GEC2	e PKPbc	Z	17:47:00.5	145.6	41.2					
WET	e pPKPbc	Z	17:47:43.0	145.8	39.7					

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BUG	e	PKPbc	Z	17:47:01.7	145.9	29.1
GRA1	e	PKPbc	Z	17:47:02.2	146.0	36.7
TNS	e	PKPbc	Z	17:47:04.0	146.6	31.9
WLF	e	PKPbc	Z	17:47:07.8	147.8	28.6
BFO	e	PKPbc	Z	17:47:07.9	148.2	33.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/25	17:35:33.0	20.065S	170.154E	20.9				SZGRF

Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e	PKPbc	Z	17:55:06.2	144.5	34.0			
TANN	e	PKPbc	Z	17:55:07.4	144.9	38.3			
IBBN	e	PKPbc	Z	17:55:07.9	145.0	29.7			
MOX	e	PKPbc	Z	17:55:07.7	145.0	36.9			
	e	pPKPbc	Z	17:55:14.0					
UBBA	e	PKPbc	Z	17:55:09.4	145.5	34.3			
ROTZ	e	PKPbc	Z	17:55:09.6	145.5	38.5			
GEC2	e	PKPbc	Z	17:55:09.3	145.6	41.6			
WET	e	PKPbc	Z	17:55:09.9	145.7	40.1			
BUG	e	PKPbc	Z	17:55:10.6	145.9	29.5			
GRA1	e	PKPbc	Z	17:55:11.1	146.0	37.1			
TNS	e	PKPbc	Z	17:55:12.7	146.5	32.3			
STU	e	PKPbc	Z	17:55:15.1	147.5	34.8			
WLF	e	PKPbc	Z	17:55:16.7	147.8	29.0			
BFO	e	PKPab	Z	17:55:20.4	148.2	33.7			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/25	18:27:33.7	1.562N	97.930E	33.0N	4.9			SZGRF

Northern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WET	e	P	Z	18:40:09.1	85.6	92.7	0.9	6	4.7
ROTZ	e	P	Z	18:40:11.9	86.0	92.3	0.7	3	4.6
CLZ	e	P	Z	18:40:17.5	87.3	91.0	1.6	22	5.0
TNS	e	P	Z	18:40:23.4	88.5	89.4	0.8	8	5.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/25	20:49:34.4	43.400N	17.200E	2.0G			3.7	EMSC

Adriatic Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e	Pn	Z	20:50:55.1	5.3	143.0			3.6

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GEC2	e Pn	Z	20:51:04.2	6.0	154.7						3.6
WET	e Pn	Z	20:51:10.8	6.5	150.9						3.8
ROTZ	e Pn	Z	20:51:20.2	7.2	149.8						
BFO	e Pn	Z	20:51:28.6	7.9	125.3						
MOX	e Pn	Z	20:51:34.6	8.2	150.2						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/25	21:45:58.5	22.857S	173.506W	33.0G		5.6		SZGRF

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 22:05:43.2	148.8	6.8					
RUE	e PKPbc	Z 22:05:45.5	149.9	13.5					
NRDL	e PKPbc	Z 22:05:46.2	150.2	6.7					
CLZ	e PKPbc	Z 22:05:47.9	150.9	7.4					
CLL	e PKPbc	Z 22:05:48.4	151.1	12.5					
NEUB	e PKPbc	Z 22:05:49.1	151.4	10.2					
BRG	e PKPbc	Z 22:05:48.9	151.4	14.4					
FBE	e PKPbc	Z 22:05:49.4	151.4	13.3					
MOX	e PKPbc	Z 22:05:50.1	151.9	10.1					
	e L	Z 23:18:21.8			20.5	1079		5.6	
GRA1	e L	Z 23:21:20.9	152.9	9.6	19.6	1054		5.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/25	23:05:38.5	20.052S	178.368W	33.0G				SZGRF

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e PKPbc	Z 23:25:18.6	147.5	15.4					
CLL	e PKPbc	Z 23:25:18.3	147.5	20.2					
BRG	e PKPbc	Z 23:25:19.0	147.7	22.0					
TANN	e PKPbc	Z 23:25:21.2	148.4	19.7					
ROTZ	e PKPbc	Z 23:25:23.1	149.1	19.6					
GRA1	e PKPbc	Z 23:25:23.9	149.4	17.9					
GEC2	e PKPbc	Z 23:25:24.4	149.6	22.9					
WLF	e PKPbc	Z 23:25:26.3	150.2	8.6					
STU	e PKPbc	Z 23:25:26.9	150.6	14.6					
BFO	e PKPbc	Z 23:25:28.0	151.2	13.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/26	10:00:29.5	23.390S	174.600W	41.7		5.1		SZGRF

Tonga Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	10:20:13.6	149.2	8.8					
	e pPKPbc	Z	10:20:25.9							
NRDL	e PKPbc	Z	10:20:17.0	150.7	8.8					
	e pPKPbc	Z	10:20:29.5							
IBBN	e pPKPbc	Z	10:20:30.9	151.0	4.5					
CLZ	e PKPbc	Z	10:20:18.6	151.3	9.5					
	e pPKPbc	Z	10:20:31.4							
CLL	e PKPbc	Z	10:20:19.0	151.5	14.7					
	e pPKPbc	Z	10:20:31.8							
BRG	e PKPbc	Z	10:20:19.6	151.7	16.7					
	e pPKPbc	Z	10:20:32.4							
BUG	e pPKPbc	Z	10:20:32.7	151.9	3.6					
MOX	e PKPbc	Z	10:20:20.9	152.3	12.4					
	e pPKPbc	Z	10:20:33.6							
	e L	Z	11:35:35.0			18.9	378		5.2	
TANN	e PKPbc	Z	10:20:21.2	152.4	14.1					
ROTZ	e pPKPbc	Z	10:20:35.3	153.1	13.9					
GRA1	e L	Z	11:30:31.3	153.3	12.0	20.7	269		5.0	
GEC2	e PKPbc	Z	10:20:24.1	153.7	17.4					
	e pPKPbc	Z	10:20:36.6							
BFO	e PKPbc	Z	10:20:26.6	155.0	6.4					
	e pPKPab	Z	10:20:54.2							

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/26 17:35:14.3 5.700S 81.400W 8.0 5.1 5.5
 Near coast of northern Peru NEIC

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	17:48:42.7	96.0	268.3	1.2	8	5.1		
	e L	Z	18:29:37.9			20.9	1858		5.5	
MOX	e L	Z	18:28:36.4	96.3	268.7	19.0	1436		5.5	

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/26 18:43:59.0 6.674S 12.814W 33.0G 4.9 4.7
 Ascension Island region SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	18:54:03.5	60.1	207.8	1.0	11	4.9		
	e L	Z	19:18:09.3			19.6	532		4.7	
MOX	e L	Z	19:18:49.3	61.1	208.0	19.0	514		4.7	

Date Origin Time Lat Long Depth mb Ms ML Source

2009/03/26 19:19:41.0
Ryukyu Islands, Japan

26.928N 128.033E 33.0G 6.2 5.1 SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	19:31:53.8	81.2	55.0	1.3	214	6.1		
RUE	e P	Z	19:31:58.8	82.2	55.1	1.3	152	6.1		
	e PP	Z	19:35:06.8							
BSEG	e P	Z	19:32:03.1	83.0	52.7	1.4	257	6.3		
BRG	e P	Z	19:32:02.6	83.0	55.1	1.3	87	5.8		
CLL	e P	Z	19:32:03.8	83.2	54.4	1.1	70	5.8		
	e PP	Z	19:35:15.2							
FBE	e P	Z	19:32:04.4	83.3	54.7	1.7	285	6.2		
	e PP	Z	19:35:15.6							
NEUB	e P	Z	19:32:07.7	83.9	53.5	1.5	345	6.3		
NRDL	e P	Z	19:32:08.2	84.0	52.4	1.8	368	6.3		
TANN	e P	Z	19:32:08.1	84.0	54.0	1.7	203	6.1		
	e PP	Z	19:35:22.0							
WERD	e P	Z	19:32:08.4	84.1	53.8	1.6	177	6.0		
	e PP	Z	19:35:22.0							
GUNZ	e P	Z	19:32:08.8	84.1	53.9	1.6	289	6.3		
	e PP	Z	19:35:22.8							
PLN	e P	Z	19:32:08.8	84.2	53.7	1.9	1456	6.9		
WERN	e P	Z	19:32:09.0	84.2	53.9	1.5	222	6.2		
	e PP	Z	19:35:22.9							
CLZ	e P	Z	19:32:09.8	84.2	52.5	1.3	366	6.5		
GEC2	e P	Z	19:32:09.3	84.3	54.7	1.3	104	5.9		
MOX	e P	Z	19:32:09.2	84.3	53.4	1.7	220	6.1		
	e L	Z	20:10:54.7			19.5	735		5.1	
ROTZ	e P	Z	19:32:11.2	84.6	53.7	1.5	292	6.3		
WET	e P	Z	19:32:10.9	84.6	54.2	1.7	196	6.1		
UBBA	e P	Z	19:32:13.5	85.0	52.2	1.7	312	6.3		
GRA1	e P	Z	19:32:14.0	85.1	53.0	1.5	472	6.4		
	e PP	Z	19:35:31.3							
	e L	Z	20:04:41.9			21.1	612		5.0	
IBBN	e P	Z	19:32:14.3	85.2	50.6	1.0	283	6.3		
RJOB	e P	Z	19:32:15.5	85.4	54.0	1.5	188	6.0		
BUG	e P	Z	19:32:18.1	86.0	50.2	1.4	233	6.1		
FUR	e P	Z	19:32:18.6	86.0	52.9	1.3	520	6.5		
STU	e P	Z	19:32:21.5	86.7	51.5	1.5	182	6.0		
	e PP	Z	19:35:43.8							
BFO	e P	Z	19:32:24.6	87.4	50.8	1.5	128	6.0		
WLF	e P	Z	19:32:26.6	87.7	49.3	1.0	63	5.9		
	e PP	Z	19:35:52.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/27	02:58:49.9	62.027N	138.997W	33.0N	5.3	4.4		SZGRF

Southern Yukon Territory, Canada

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	03:09:04.5	61.5	344.2	1.4	78	5.7		
IBBN	e P	Z	03:09:11.9	62.7	343.2	1.5	61	5.5		
NRDL	e P	Z	03:09:13.1	62.9	344.3	1.5	37	5.3		
BUG	e P	Z	03:09:16.2	63.4	343.1	0.8	18	5.3		
CLZ	e P	Z	03:09:18.1	63.6	344.5	1.0	34	5.5		
CLL	e P	Z	03:09:23.3	64.5	345.9	1.2	18	5.2		
WLF	e P	Z	03:09:26.5	64.9	342.8	1.2	18	5.2		
MOX	e P	Z	03:09:26.4	64.9	345.3	1.0	22	5.3		
	e L	Z	03:43:56.9			18.0	198		4.4	
BRG	e P	Z	03:09:27.3	65.1	346.4	1.6	36	5.4		
TANN	e P	Z	03:09:28.8	65.3	345.7	1.2	16	5.1		
GRA1	e P	Z	03:09:32.2	65.8	345.2	1.1	31	5.4		
	e L	Z	03:39:39.3			19.2	253		4.4	
ROTZ	e P	Z	03:09:32.7	65.9	345.7	1.3	14	5.0		
STU	e P	Z	03:09:35.2	66.3	344.3	1.3	20	5.2		
WET	e P	Z	03:09:37.3	66.6	346.1	1.2	19	5.2		
BFO	e P	Z	03:09:36.9	66.6	344.0	1.2	23	5.3		
GEC2	e P	Z	03:09:40.0	67.0	346.5	1.3	13	5.0		
FUR	e P	Z	03:09:41.6	67.3	345.4	0.9	18	5.3		
RJOB	e P	Z	03:09:45.5	67.9	346.2	1.5	14	5.0		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/27 04:54:32.2 48.485N 172.214W 32.6 5.1 SZGRF
 South of Aleutian Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	05:06:48.2	81.8	2.3	0.9	14	5.1		
	e pP	Z	05:06:57.6							

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/27 10:40:21.5 25.193S 178.856W 33.0N SZGRF
 South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	11:00:10.4	150.5	17.0					
	e PKPab	Z	11:00:17.2							
NRDL	e PKPbc	Z	11:00:13.5	151.9	17.4					
CLL	e PKPbc	Z	11:00:14.9	152.4	23.6					
CLZ	e PKPbc	Z	11:00:15.3	152.4	18.3					
BRG	e PKPbc	Z	11:00:15.3	152.5	25.7					
MOX	e PKPbc	Z	11:00:16.9	153.3	21.5					
TANN	e PKPbc	Z	11:00:17.1	153.3	23.3					
	e PKPab	Z	11:00:29.2							

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ROTZ	e	PKPbc	Z	11:00:18.7	154.0	23.3
GEC2	e	PKPbc	Z	11:00:18.7	154.4	27.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/27	17:26:41.1	18.661S	68.910W	33.0N	5.5	4.6		SZGRF
Chile-Bolivia border region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:40:14.1	98.0	250.5	0.8	9	5.5		
	e L	Z 18:41:25.8			19.0	197		4.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/28	09:02:27.3	37.089N	22.508E	10.0G				SZGRF
Southern Greece								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OBKA	e P	Z 09:05:15.3	11.1	145.1					
ARSA	e P	Z 09:05:21.4	11.4	150.6					
KBA	e P	Z 09:05:25.5	12.1	142.6					
MOA	e P	Z 09:05:33.6	12.3	147.7					
RJOB	e P	Z 09:05:37.1	12.8	142.6					
GEC2	e P	Z 09:05:46.8	13.4	148.2					
WET	e P	Z 09:05:53.5	13.9	146.3					
ROTZ	e P	Z 09:06:03.1	14.7	145.8					
GRA1	e P	Z 09:06:06.2	15.0	142.9					
TANN	e P	Z 09:06:10.8	15.1	147.8					
STU	e P	Z 09:06:09.8	15.2	135.4					
BFO	e P	Z 09:06:12.0	15.3	132.1					
MOX	e P	Z 09:06:16.1	15.6	146.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/28	15:58: 7.9	21.446S	174.669W	33.0N				SZGRF
Tonga Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 16:17:48.4	147.3	8.6					
CLZ	e PKPbc	Z 16:17:53.3	149.4	9.2					
CLL	e PKPbc	Z 16:17:53.7	149.5	14.2					
BRG	e PKPbc	Z 16:17:54.2	149.8	16.1					
TANN	e PKPbc	Z 16:17:56.0	150.5	13.6					
ROTZ	e PKPbc	Z 16:17:57.5	151.2	13.4					
GEC2	e PKPbc	Z 16:17:58.6	151.8	16.7					
RJOB	e PKPbc	Z 16:18:02.7	153.0	15.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/28								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z 18:18:00.5							
CLL	e PKP	Z 18:18:00.5							
GEC2	e PKP	Z 18:18:02.5							
MOX	e PKP	Z 18:18:03.6							
TANN	e PKP	Z 18:18:02.9							
WET	e PKP	Z 18:18:04.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/29	08:43: 5.6	41.776N	14.090E	10.0G				SZGRF
Southern Italy								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 08:44:48.0	7.1	177.6					
	e Sn	Z 08:46:03.7							
WET	e Pn	Z 08:44:52.1	7.4	173.0					
	e Sn	Z 08:46:11.9							
BFO	e Pn	Z 08:44:58.0	7.7	146.1					
ROTZ	e Pn	Z 08:45:01.8	8.1	170.0					
	e Sn	Z 08:46:26.2							
GRA1	e Sn	Z 08:46:27.5	8.2	164.8					
TANN	e Pn	Z 08:45:10.2	8.7	172.0					
	e Sn	Z 08:46:43.5							
MOX	e Pn	Z 08:45:15.2	9.0	168.2					
	e Sn	Z 08:46:48.5							
TNS	e Pn	Z 08:45:18.1	9.3	153.0					
	e Sn	Z 08:46:56.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/29	17:39:20.0	19.010S	178.320W	33.0G				SZGRF
Fiji Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z 17:59:00.3	145.9	14.3					
IBBN	e PKPbc	Z 17:59:01.9	146.4	10.4					
CLZ	e PKPbc	Z 17:59:02.4	146.5	15.0					
CLL	e PKPbc	Z 17:59:02.2	146.5	19.6					
BRG	e PKPbc	Z 17:59:02.9	146.7	21.4					
MOX	e PKPbc	Z 17:59:04.7	147.4	17.6					

	e	PKPab	Z	17:59:07.3					
TANN	e	PKPbc	Z	17:59:05.1	147.4	19.2			
ROTZ	e	PKPbc	Z	17:59:07.0	148.1	19.1			
TNS	e	PKPbc	Z	17:59:07.4	148.3	12.2			
	e	PKPab	Z	17:59:10.4					
GRA1	e	PKPab	Z	17:59:10.7	148.4	17.4			
WET	e	PKPbc	Z	17:59:08.2	148.5	20.6			
	e	PKPab	Z	17:59:11.5					
GEC2	e	PKPbc	Z	17:59:08.3	148.6	22.2			
WLF	e	PKPbc	Z	17:59:10.1	149.1	8.3			
FUR	e	PKPbc	Z	17:59:11.7	149.8	18.3			
	e	PKPab	Z	17:59:17.3					
RJOB	e	PKPbc	Z	17:59:11.3	149.9	21.3			
	e	PKPab	Z	17:59:17.5					
BFO	e	PKPbc	Z	17:59:12.2	150.2	12.7			
	e	PKPab	Z	17:59:17.9					

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/30 03:42:47.8 56.546N 153.388W 33.0G 5.4 4.9
 Kodiak Island, Alaska, United States, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z 03:54:01.4	70.0	349.1	0.9	47	5.6		
NRDL	e P	Z 03:54:01.7	70.1	350.4	0.8	40	5.6		
CLZ	e P	Z 03:54:06.3	70.8	350.6	1.1	52	5.6		
BUG	e P	Z 03:54:05.9	70.8	348.9	0.8	62	5.8		
CLL	e P	Z 03:54:10.2	71.6	352.1	1.0	23	5.3		
UBBA	e P	Z 03:54:11.9	71.8	350.4	1.9	67	5.5		
BRG	e P	Z 03:54:13.5	72.1	352.7	1.1	25	5.3		
MOX	e P	Z 03:54:13.6	72.1	351.4	0.7	38	5.6		
	e PP	Z 03:56:58.8							
	e S	E 04:03:41.0							
	e SS	N 04:08:24.7							
	e L	Z 04:30:34.3			19.4	576		4.9	
TNS	e P	Z 03:54:14.2	72.2	349.6	0.7	26	5.5		
TANN	e P	Z 03:54:15.3	72.4	351.9	1.1	20	5.1		
WLF	e P	Z 03:54:16.0	72.4	348.3	1.0	23	5.3		
GRA1	e P	Z 03:54:19.2	73.0	351.2	0.8	27	5.5		
	e PP	Z 03:57:05.0							
	e S	E 04:03:53.3							
	e SS	N 04:08:38.3							
	e L	Z 04:32:42.1			18.8	621		4.9	
ROTZ	e P	Z 03:54:19.5	73.0	351.8	0.9	23	5.3		
STU	e P	Z 03:54:23.0	73.7	350.1	1.1	25	5.2		
WET	e P	Z 03:54:23.5	73.7	352.2	1.3	25	5.1		
BFO	e P	Z 03:54:24.8	74.0	349.6	1.0	16	5.0		
GEC2	e P	Z 03:54:25.3	74.1	352.6	0.9	17	5.1		

FUR	e P	Z	03:54:27.9	74.5	351.3	0.8	30	5.4
RJOB	e P	Z	03:54:31.2	75.1	352.2	0.8	32	5.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/30	07:13:13.1	57.021N	153.051W	26.0	6.1	6.0		SZGRF

Kodiak Island, Alaska, United States, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z 07:24:20.1	69.5	349.0	1.9	444	6.3		
NRDL	e P	Z 07:24:20.2	69.6	350.3	1.9	380	6.2		
CLZ	e P	Z 07:24:24.9	70.3	350.5	2.2	779	6.4		
BUG	e P	Z 07:24:24.4	70.3	348.8	1.7	395	6.3		
CLL	e P	Z 07:24:28.8	71.1	352.0	2.0	303	6.1		
UBBA	e P	Z 07:24:30.4	71.3	350.4	1.6	151	5.9		
BRG	e P	Z 07:24:32.2	71.6	352.6	1.8	283	6.1		
MOX	e P	Z 07:24:32.2	71.6	351.3	1.9	348	6.2		
	e pP	Z 07:24:39.7							
	e PP	Z 07:27:13.0							
	e S	N 07:33:58.8							
	e SS	N 07:38:45.8							
	e L	Z 08:00:44.0			19.5	5845		5.9	
TNS	e P	Z 07:24:32.8	71.7	349.5	1.7	282	6.1		
TANN	e P	Z 07:24:34.4	71.9	351.8	1.8	212	6.0		
WLF	e P	Z 07:24:34.7	71.9	348.3	1.9	509	6.3		
GRA1	e P	Z 07:24:38.0	72.5	351.1	1.5	186	6.0		
	e pP	Z 07:24:45.3							
	e PP	Z 07:27:18.6							
	e S	N 07:34:10.3							
	e SS	N 07:39:02.6							
	e L	Z 08:02:53.0			18.0	9774		6.1	
ROTZ	e P	Z 07:24:38.1	72.5	351.6	1.7	199	6.0		
STU	e P	Z 07:24:41.7	73.2	350.0	1.4	106	5.7		
WET	e P	Z 07:24:42.2	73.2	352.1	1.8	237	5.9		
BFO	e P	Z 07:24:43.5	73.5	349.6	1.7	183	5.8		
GEC2	e P	Z 07:24:44.1	73.6	352.5	1.6	126	5.7		
FUR	e P	Z 07:24:46.6	74.0	351.2	1.6	283	6.0		
RJOB	e P	Z 07:24:49.8	74.6	352.1	1.0	68	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/30	12:07:31.9	51.806N	179.259W	33.0N	5.8			SZGRF

Andreanof Islands, Aleutian Islands, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 12:19:04.6	74.0	6.1	0.9	191	6.1		
NRDL	e P	Z 12:19:12.4	75.4	6.0	2.2	310	6.0		

IBBN	e P	Z	12:19:14.6	75.7	4.5	1.2	299	6.3
CLZ	e P	Z	12:19:16.5	76.0	6.1	2.1	531	6.3
CLL	e P	Z	12:19:17.6	76.4	7.8	1.0	69	5.8
BUG	e P	Z	12:19:19.1	76.6	4.1	1.4	151	5.9
BRG	e P	Z	12:19:19.7	76.7	8.3	1.0	64	5.7
UBBA	e P	Z	12:19:22.0	77.1	5.9	1.7	157	5.9
MOX	e P	Z	12:19:22.2	77.1	6.9	1.1	85	5.8
TANN	e P	Z	12:19:23.3	77.3	7.4	1.4	103	5.8
TNS	e P	Z	12:19:25.7	77.8	4.9	1.1	78	5.8
ROTZ	e P	Z	12:19:27.2	78.0	7.2	1.3	83	5.7
GRA1	e P	Z	12:19:28.1	78.1	6.6	1.3	228	6.1
WLF	e P	Z	12:19:29.6	78.4	3.4	1.4	121	5.7
WET	e P	Z	12:19:30.2	78.5	7.6	1.2	65	5.5
GEC2	e P	Z	12:19:31.2	78.7	8.1	1.1	62	5.6
STU	e P	Z	12:19:33.2	79.2	5.3	1.2	104	5.6
FUR	e P	Z	12:19:36.0	79.6	6.6	1.2	127	5.7
BFO	e P	Z	12:19:35.8	79.7	4.8	1.3	102	5.6
RJOB	e P	Z	12:19:37.8	79.9	7.5	0.9	45	5.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/30	12:11:51.9	51.442N	179.346W	33.0G	5.8			SZGRF
Andreanof Islands, Aleutian Islands, United States								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 12:23:31.4	74.3	6.2	1.0	150	6.0		
IBBN	e P	Z 12:23:41.3	76.1	4.6	2.1	799	6.5		
CLZ	e P	Z 12:23:43.2	76.4	6.2	1.9	366	6.2		
CLL	e P	Z 12:23:44.3	76.7	7.9	1.3	81	5.7		
BUG	e P	Z 12:23:45.8	77.0	4.2	2.0	278	6.1		
BRG	e P	Z 12:23:46.3	77.1	8.5	1.2	70	5.7		
UBBA	e P	Z 12:23:48.7	77.4	6.0	1.6	123	5.8		
MOX	e P	Z 12:23:49.0	77.5	7.0	1.3	97	5.8		
TANN	e P	Z 12:23:50.1	77.7	7.5	1.3	73	5.6		
TNS	e P	Z 12:23:52.4	78.1	5.0	1.6	127	5.8		
ROTZ	e P	Z 12:23:53.8	78.3	7.3	1.4	81	5.6		
GRA1	e P	Z 12:23:54.8	78.5	6.7	1.4	210	6.0		
WLF	e P	Z 12:23:56.4	78.8	3.5	1.7	180	5.8		
WET	e P	Z 12:23:56.9	78.9	7.7	1.3	66	5.5		
GEC2	e P	Z 12:23:57.9	79.1	8.2	1.2	58	5.5		
STU	e P	Z 12:23:59.9	79.5	5.4	1.3	113	5.6		
FUR	e P	Z 12:24:02.7	80.0	6.7	1.6	199	5.8		
BFO	e P	Z 12:24:02.6	80.0	4.8	1.4	94	5.5		
RJOB	e P	Z 12:24:04.5	80.3	7.6	1.0	31	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2009/03/30

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 13:28:49.0							
MOX	e Pn	Z 13:29:19.6							
RJOB	e Pn	Z 13:28:44.2							
TNS	e Pn	Z 13:29:36.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z 13:40:21.6							
GEC2	e Pn	Z 13:40:16.0							
MOX	e Pn	Z 13:40:42.4							
RJOB	e Pn	Z 13:40:02.2							
WET	e Pn	Z 13:40:19.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/30	16:49:47.5	20.505S	169.518E	33.0N		5.2		SZGRF

Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
MOX	e L	Z 18:26:11.5	145.2	38.1	19.6	375		5.2	
GRA1	e PKPbc	Z 17:09:23.7	146.1	38.4					
	e L	Z 18:27:50.3			18.7	366		5.2	
TNS	e PKPbc	Z 17:09:25.7	146.7	33.6					
RJOB	e PKPbc	Z 17:09:26.4	146.9	42.7					
FUR	e PKPbc	Z 17:09:27.7	147.3	40.0					
STU	e PKPbc	Z 17:09:28.7	147.6	36.1					
WLF	e PKPbc	Z 17:09:30.1	148.0	30.4					
BFO	e PKPbc	Z 17:09:30.3	148.3	35.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/30	17:38:21.0	56.951N	153.608W	33.0N	5.2	4.7		SZGRF

Kodiak Island, Alaska, United States, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z 17:49:27.6	69.7	349.3	1.2	40	5.4		
NRDL	e P	Z 17:49:27.8	69.7	350.6	1.0	33	5.4		
CLZ	e P	Z 17:49:32.4	70.4	350.8	1.1	37	5.4		
BUG	e P	Z 17:49:31.9	70.5	349.1	0.8	34	5.5		
CLL	e P	Z 17:49:36.3	71.2	352.3	1.0	14	5.1		

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UBBA	e P	Z	17:49:37.9	71.4	350.7	2.3	67	5.4	
BRG	e P	Z	17:49:39.6	71.7	352.9	1.3	22	5.1	
MOX	e P	Z	17:49:39.7	71.7	351.6	0.9	24	5.3	
	e L	Z	18:26:11.5			19.6	375		4.7
TNS	e P	Z	17:49:40.3	71.8	349.8	1.0	17	5.1	
TANN	e P	Z	17:49:41.8	72.0	352.1	1.1	12	4.9	
WLF	e P	Z	17:49:42.3	72.1	348.6	2.1	91	5.5	
GRA1	e P	Z	17:49:45.5	72.6	351.4	2.2	92	5.5	
	e L	Z	18:27:50.3			18.7	366		4.7
ROTZ	e P	Z	17:49:45.6	72.6	352.0	1.3	21	5.1	
WET	e P	Z	17:49:49.6	73.3	352.4	2.4	81	5.3	
BFO	e P	Z	17:49:50.9	73.7	349.9	1.3	19	5.0	
GEC2	e P	Z	17:49:51.5	73.7	352.8	1.1	12	4.8	
RJOB	e P	Z	17:49:57.3	74.7	352.4	0.9	14	5.0	

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/30 21:59:38.8 31.072N 130.967E 33.0N 4.9
 Kyushu, Japan SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	22:11:50.0	81.1	50.6					
CLL	e P	Z	22:11:51.2	81.3	49.9	0.8	7	4.8		
CLZ	e P	Z	22:11:56.5	82.2	48.1	0.9	6	4.8		
ROTZ	e P	Z	22:11:58.8	82.7	49.2	1.4	11	4.9		
GRA1	e P	Z	22:12:02.1	83.2	48.5	0.9	7	4.9		
RJOB	e P	Z	22:12:04.5	83.7	49.4					
TNS	e P	Z	22:12:06.9	84.1	46.6	0.9	6	4.9		
FUR	e P	Z	22:12:06.6	84.2	48.4	0.9	9	5.0		
BFO	e P	Z	22:12:13.0	85.5	46.3					
WLF	e P	Z	22:12:14.4	85.6	44.9					

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/03/31 01:46: 1.2 43.582N 18.807E 10.0G
 Northwestern Balkan Peninsula SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e Pn	Z	01:47:27.9	5.9	132.5					
	e Sn	Z	01:48:33.0							
GEC2	e Pn	Z	01:47:33.4	6.3	144.3					
	e Sn	N	01:48:39.2							
WET	e Pn	Z	01:47:41.9	6.9	141.5					
FUR	e Pn	Z	01:47:42.2	7.0	128.4					
ROTZ	e Pn	Z	01:47:51.7	7.7	141.3					
GRA1	e Pn	Z	01:47:55.8	8.0	136.7					
TANN	e Pn	Z	01:47:57.5	8.1	145.3					

MOX	e Pn	Z	01:48:04.6	8.6	142.6
CLL	e Pn	Z	01:48:07.3	8.7	150.9
BFO	e Pn	Z	01:48:05.1	8.7	119.2
TNS	e Pn	Z	01:48:19.3	9.7	129.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/31	02:32:56.3	7.070S	155.585E	33.0				SZGRF

Bougainville - Solomon Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z	02:51:55.9	125.4	43.9					
	e pPKPdf	Z	02:52:04.5							
BRG	e PKPdf	Z	02:51:56.7	125.9	49.5					
CLL	e PKPdf	Z	02:51:57.0	126.1	48.2					
	e pPKPdf	Z	02:52:05.2							
NRDL	e PKPdf	Z	02:51:58.1	126.5	44.4					
	e pPKPdf	Z	02:52:06.5							
CLZ	e PKPdf	Z	02:51:59.0	126.9	45.1					
TANN	e PKPdf	Z	02:51:58.8	126.9	48.2					
	e pPKPdf	Z	02:52:07.4							
MOX	e PKPdf	Z	02:51:59.1	127.2	47.1					
	e pPKPdf	Z	02:52:07.4							
GEC2	e PKPdf	Z	02:51:59.4	127.3	50.4					
	e pPKPdf	Z	02:52:08.0							
ROTZ	e PKPdf	Z	02:51:59.5	127.5	48.2					
	e pPKPdf	Z	02:52:08.4							
WET	e PKPdf	Z	02:52:00.0	127.6	49.3					
	e pPKPdf	Z	02:52:08.6							
GRA1	e PKPdf	Z	02:52:00.7	128.0	47.2					
	e pPKPdf	Z	02:52:09.2							
BUG	e PKPdf	Z	02:52:01.6	128.5	41.8					
TNS	e pPKPdf	Z	02:52:11.3	128.9	43.8					
STU	e PKPdf	Z	02:52:04.2	129.6	45.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/03/31	22:22:14.3	19.990S	179.890E	484.3				SZGRF

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e pPKPab	Z	22:42:55.0	146.5	17.6					
CLL	e PKPab	Z	22:41:04.2	147.0	23.1					
	e pPKPab	Z	22:42:55.5							
IBBN	e PKPab	Z	22:41:05.1	147.1	13.7					
CLZ	e pPKPab	Z	22:42:56.4	147.1	18.4					
BRG	e PKPab	Z	22:41:05.0	147.2	24.9					

MOX	e	PKPab	Z	22:41:08.5	148.0	21.1
TANN	e	PKPab	Z	22:41:08.6	148.0	22.7
	e	pPKPab	Z	22:42:59.5		
ROTZ	e	PKPab	Z	22:41:11.5	148.6	22.7
	e	pPKPab	Z	22:43:00.9		
TNS	e	PKPab	Z	22:41:13.1	149.0	15.8
WET	e	PKPab	Z	22:41:13.1	149.0	24.2
STU	e	PKPab	Z	22:41:18.7	150.3	17.8
RJOB	e	PKPab	Z	22:41:18.8	150.3	25.1
FUR	e	PKPab	Z	22:41:19.1	150.4	22.0
BFO	e	PKPab	Z	22:41:21.1	150.9	16.5

Format description

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(T. Plenefisch, Email: plene@szgrf.bgr.de)

In general all regional and teleseismic events clearly recorded with stations of the Gräfenberg-Array (GRF) and stronger events recorded with stations of the German Regional Seismological Network (GRSN) are included in this bulletin. Each event is reported by an EPICENTER LINE, a REGION LINE and a block of PHASE LINES.

EPICENTER LINE:

Date	Date of the event
Origin Time	Origin time of the event
Lat	Geographic latitude (N/S) of epicenter in degree
Long	Geographic longitude (E/W) of epicenter in degree
Depth	Depth of the hypocenter beneath the surface in kilometer
	Appended flag indicates the method by which the depth was determined:
	BLANK - free
	N - preset depth of 33 kilometer
	G - geophysicist preset depth
mb, Ms, ML	Magnitudes of the event and magnitude type
Source	Abbreviations for the authority (e.g. SZGRF, NEIC, SED, MAD)

REGION LINE:

The region name of the epicenter location.

PHASE LINE:

Sta	Station code of the reported phase
Phase	Preceded flag for the sharpness of the onset of the phase
	e - emergent
	i - impulsive
	w - weak

ISC phase code
Component where the phase was picked

Time	Arrival time of the reported phase
Dist	Distance from the epicenter location to the station in degree
BAz	Backazimuth from the epicenter location to the station in degree
T[s]	Phase Period
A[nm]	Phase Amplitude
mb	Body wave magnitude
MS	Surface wave magnitude
ML	Local Richter magnitude